

3 Van Wyck Lane
Suite 2
Wappingers Falls, New York 12590
Phone: 845-223-3202
August 5, 2020

Town of Wappinger Planning Board
20 Middlebush Road
Wappingers Falls, NY 12590

Re: Hudson Valley Lighting
Grid #6256-02-841673
M.A. Day Job No. 2020.077

Chairman Flowers and Planning Board members,

In response to the various review letters received by this office, we offer the following responses. Original comments from each letter are italicized. Our responses are in bold.
Per the CPL July 2, 2020 letter:

1. *Approval from the NYSDEC is required, a Wetland Permit may be required.*
Application shall be made to the DEC upon substantial completion of the SWPPP. The Board shall be copied on all NYSDEC correspondence.
2. *The proposed limit of disturbance exceeds 1 acre. As a result, the project will require coverage under the NYSDE SPDES General Permit for Construction Activities and a full Stormwater Pollution Prevention Plan will be required.*
The full SWPPP is forthcoming in a future submission.
3. *Our office should be contacted to witness all soil testing for stormwater management practices, please call to coordinate.*
Soil testing is scheduled for the third week of August.
4. *DCDBCH approval for the sizing of the septic system is required.*
The DCCBCH determination letter stating the septic is adequate for this proposal is attached herein.
5. *Section E.2. h. iv. on page 11 of the FEF has missing text, please revise.*
The FEF has been updated and is included herein.
6. *There are concerns over the proposed construction access from Maloney Road and should be reviewed by the Planning Board.*
The applicant has relocated the construction access to Airport Drive. The Maloney Road access has been removed from the plan.
 - a. *This is a Town Road that may not be rated for frequent heavy construction vehicle activity expected for the size of this construction project. The Town Highway Superintendent must provide approval of the use of Maloney Road for this access;*
 - b. *The Town of LaGrange Highway Superintendent should be contacted to discuss the above as well;*

- c. *Maloney Road is a residential area and the increased construction activity may raise concerns from the area residents;*
- d. *It is unclear why this construction entrance is necessary and appears that it increases the construction costs compared to exiting to Airport Drive;*
- e. *Please revise Sheet GD.1 to show the full extent of the proposed construction entrance;*
- f. *provide construction detail for the proposed access road;*
- g. *provide restoration notes for the area; and*
- h. *This temporary feature should not be shown on Sheets SP.1 or SP.2.*

7. *Please provide the following additional plan sheets:*

Additional sheets have been provided.

- a. *Landscaping;*
 - b. *Utility (show all existing water and septic features);*
 - c. *Vehicle Maneuvering;*
8. *It is unclear if any tree clearing is proposed, please clarify and provide Indiana Bat tree clearing notes if necessary.*

The required tree clearing has been identified on the Landscaping plan. The note regarding bats has been added to the Title sheet and Landscaping sheet.

9. *The following comments apply to the parking layout:*

- a. *If the Planning Board approves the reduced parking proposal based on limit of employees as stated in the Jaleli LLC/HV Lighting letter dated June 11, 2020, a note should be added to the Site Plan indicating these proposed restrictions of maximum number of employees at 166 total;*

This note has been added to the Title sheet, "EMPLOYEES ARE LIMITED TO 166 TOTAL. IN THE EVENT EMPLOYMENT EXCEEDS 166, PORTIONS OF BANKED PARKING SHALL BE INSTALLED." It seems reasonable parking be installed incrementally as employment exceeds 166; 25 parking spaces to be installed for employees from 167 to 192, 25 more for 193 to 218, etc. We defer to the Board on the specifics. Lighting will be provided as parking spaces are constructed.

- b. *The above referenced letter does not appear to match what is shown on the Site Plan, please clarify if land banked parking spaces are proposed;*

The land banked spaces are not proposed to be installed until employment numbers exceed 166.

- c. *A portion of the proposed land banked parking spaces on the east side of the building are labeled at the existing fenced storage area, please clarify if the storage area is to be removed;*

The storage area is to be removed and is labeled as such on the Existing Conditions plan.

- d. *Please review dimensions of the proposed full size parking spaces, not all appear to be 9'x18'; and*

The parking spaces have been resized where necessary.

- e. *Please label dimensions of the proposed compact spaces and provide a construction detail.*

The spaces have been dimensioned and a detail has been added.

10. *Retaining walls over 4' in height must be designed by a NYS Licensed Engineer. Please provide details.*

A retaining wall detail has been provided.

11. *The following comments apply to the Sheet GD.1:*

- a. *Provide construction details for all stormwater management features, including: infiltration chambers, bioretention area, etc.;*

Soil testing is being scheduled for infiltration and is expected to be completed by mid August. A full SWPPP and stormwater management details will be provided shortly thereafter.

- b. *Please provide construction sequencing notes;*

These notes have been added to sheet D.2 of the plan set.

- c. *Show the location of the proposed temporary swale to correlate with the construction detail;*

The requirement and location of the swale is dependent on the stormwater design and will be shown (or not) accordingly when the SWPPP is developed.

- d. *Provide protection around the infiltration chambers throughout the duration of construction;*

Protection will be shown

- e. *Please identify roof leader locations for the proposed addition;*

Roof leaders have been provided at the northern corners of the proposed addition.

- f. *Show locations of soil stockpiles and contractor staging areas; and*

Staging and stockpile areas are shown.

- g. *Please clarify the proposed grading contours in the driveway area around the truck loading and infiltration chambers.*

12. *Provide additional refuse enclosure details showing the partition wall between adjoining enclosures as shown on the site plan.*

The detail has been revised.

13. *Provide a construction detail for the proposed porous pavement.*

This will be provided following infiltration testing.

Per the FP Clark letter dated July 2, 2020 we offer the following:

REVIEW COMMENTS

1. SEQRA.

- a. *The Proposed Action is considered a Type I action pursuant to SEQRA because it involves a facility with more than 100,000 square feet of floor area.*

Comment noted.

- a. *The Full EAF notes that the Site may contain the Indiana Bat, a species that is considered threatened or endangered. The site plan proposes the removal of 0.16 acres of forested land. The Applicant should contact the New York State Department of Environmental Conservation (NYSDEC) for review and comment. All correspondence to and from this agency should be submitted to the Planning Board.*

Comment noted. Correspondence to the NYSDEC will be forwarded to the Town.

2. *Parking. The Applicant currently employs 80 full-time employees and the expansion will accommodate a total of 30 additional full-time employees. Over the next 5 years, the Applicant's plan is to have a total of 166 employees. The Applicant is proposing 200 of the required 387 parking spaces given the anticipated maximum of 166 employees to be generated by the existing and proposed increase in use. The Applicant is requesting that the remaining required 187 parking spaces be provided as "landbanked" parking. In accordance with Section 240-96.F of the Zoning Law, up to 50% of the required parking can be provided as "landbanked" parking. The number of parking spaces the Applicant is proposing to "landbank" is within the 50% allowance.*

Comment noted.

3. *Wetlands. According to the plans and Full EAF, there are Federal and State regulated wetlands on and adjacent to the property. A wetland functional analysis report concerning the on-site wetlands should be submitted for review. A NYSDEC wetland jurisdictional map should also be submitted by the Applicant. Further, the Applicant should verify if the project would require approvals from the Army Corps of Engineers or other regulating agencies.*

This report is forthcoming.

4. *Lighting. The proposed lighting plan shows "hot spots" as high as 10 footcandles which could be considered excessive illumination. We recommend that the lighting plan be revised to lower the footcandle levels. Additionally, a backlight, uplight, glare (BUG) rating is provided for one of the two luminaires. BUG ratings should be provided for all proposed lights. The lighting plan should also include the color temperature for the two proposed luminaries. It is recommended that the color temperature not exceed 3000K.*

The light fixtures have been replaced with 3,000 K fixtures and the hot spots have been eliminated. Cut sheets are attached herein.

5. *Floodplain. A portion of the property is located within the 100-year floodplain. It appears that the Project does not include development within the 100-year floodplain and may not require a Floodplain Development Permit pursuant to Section 240-33 of the Zoning Law and Chapter 133 of the Town Code. We defer to the Zoning Administrator and Town Engineer with regard to this matter.*

There is no proposed disturbance in the floodplain.

Please find enclosed with this submission:

- Twelve (12) sets of the site plan, last revised August 3, 2020
- Twelve (12) copies of the FEAF
- Twelve (12) copies of the lighting specifications
- One (1) CD containing a digital copy of the entire submission

We look forward to discussing this project with the Board and the public at the upcoming September Planning Board meeting. If you have any questions or require any additional information, I can be reached at 845.223.3202.

Very truly yours,

A handwritten signature in black ink, appearing to be 'Amy Bombardieri', with a long horizontal line extending to the right.

Amy Bombardieri
Day and Stokosa Engineering, P.C.

Cc: CPL, Client, file



COUNTY OF DUTCHESS
DEPARTMENT OF BEHAVIORAL AND COMMUNITY HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES

February 4, 2020

Daniel S. Steinberg, P.E.
Fellenzer Engineering, LLP
22 Mulberry Street, Suite 2A
Middletown, NY 10940

Re: Hudson Valley Lighting – Office Expansion
Tax Map No: 135689-6259-02-841673
Town of Wappinger

Dear Mr. Steinberg,

We are in receipt of your letter dated January 31, 2020 regarding the proposed employee addition at the above-referenced facility. Please be advised this office has no objection to the proposed modification as you have demonstrated adequate capacity in the existing approved sewage disposal system based on water meter readings and supporting documentation provided.

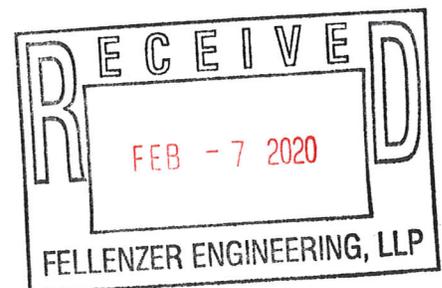
The proposed addition increases the number of employees from 102 to a maximum of 166. The total flow, based on the analysis provided (8.9 gallons per day per employee), will be 1500 gallons per day, which is within the existing septic system capacity of 1600 gallons per day.

If you have any questions or concerns regarding this correspondence, please feel free to contact me at (845) 486-3404.

Yours very truly,

Daniel J. Keeler, P.E.
Senior Public Health Engineer
Environmental Health Services

cc: File (108195)



REPORT NUMBER: PRORATED FROM RAB04286

PAGE: 1 OF 10

ISSUE DATE: 05/8/18

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

LUMINAIRE: CAST FINNED METAL HOUSING, 6 CHIP ON BOARD LIGHT EMITTING DIODES, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, CLEAR GLASS LENS IN CAST BRONZE PAINTED METAL FRAME.

LAMPS: SIX WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDS), 2 LEDES TILTED 63-DEGREES FROM VERTICAL BASE-UP POSITION AND CANTED 75-DEGREES FROM STRAIGHT AHEAD, 2 LEDES TILTED 67-DEGREES FROM VERTICAL BASE-UP POSITION AND CANTED 68-DEGREES FROM STRAIGHT AHEAD, 2 LEDES TILTED 58-DEGREES FROM VERTICAL BASE-UP POSITION AND CANTED 40-DEGREES FROM STRAIGHT AHEAD.

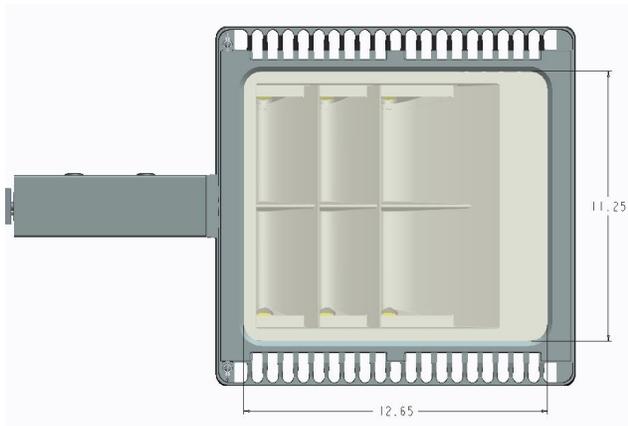
ABSOLUTE: NOTE: THIS REPORT WAS PRORATED FROM RAB04286 WHICH WAS ALED2T150Y. ACTUAL PERFORMANCE MAY VARY.

WATT: TOTAL INPUT WATTS = 134.5 W AT 120.0 VAC.

LED DRIVER: LED DRIVER: RDD-160

PROCEDURE: TEST PROCEDURE: IESNA LM-79-08

NOTE: LM-80 DATA AVAILABLE FROM MANUFACTURER FOR SOLID STATE SOURCE



Checked X.CAO

Approved D.WANG-MUNSON

REPORT NUMBER: PRORATED FROM RAB04286

PAGE: 2 OF 10

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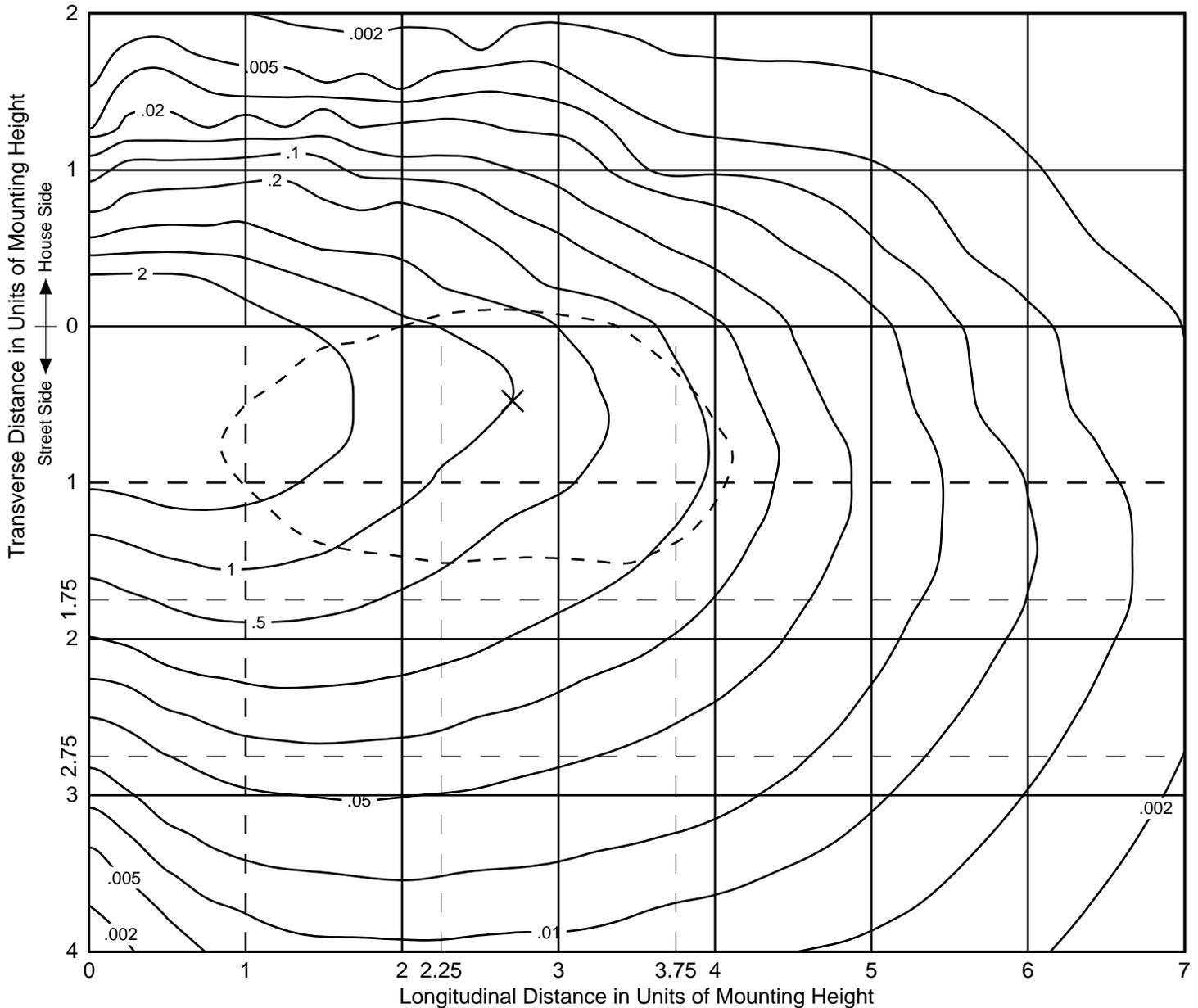
CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 25-foot mounting height

IES Classification: Medium, Type II
 Cutoff Classification (deprecated): Semicutoff

--- 1/2 Maximum Candela trace
 X Maximum Candela point



REPORT NUMBER: PRORATED FROM RAB04286

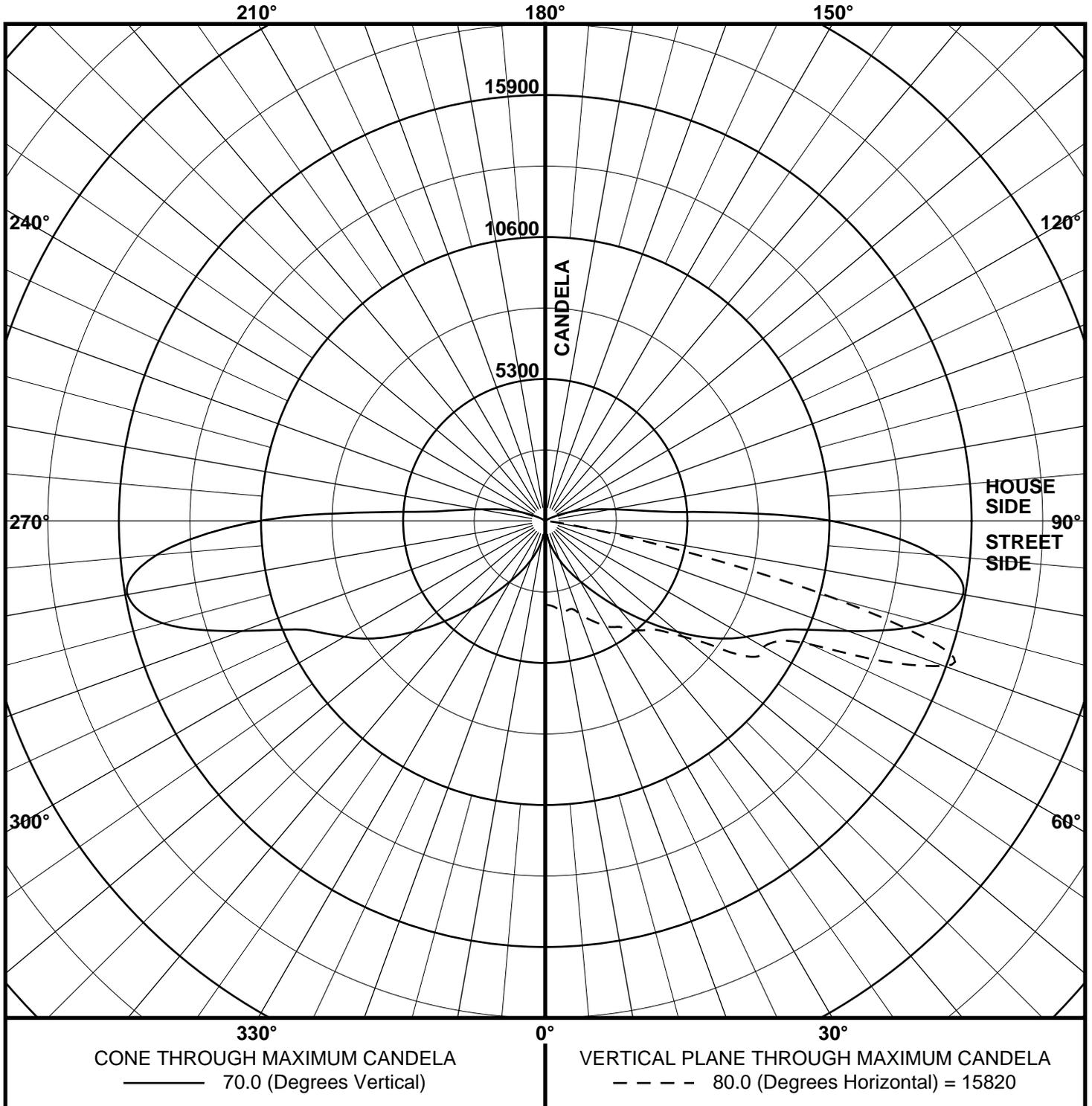
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PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA



REPORT NUMBER: PRORATED FROM RAB04286

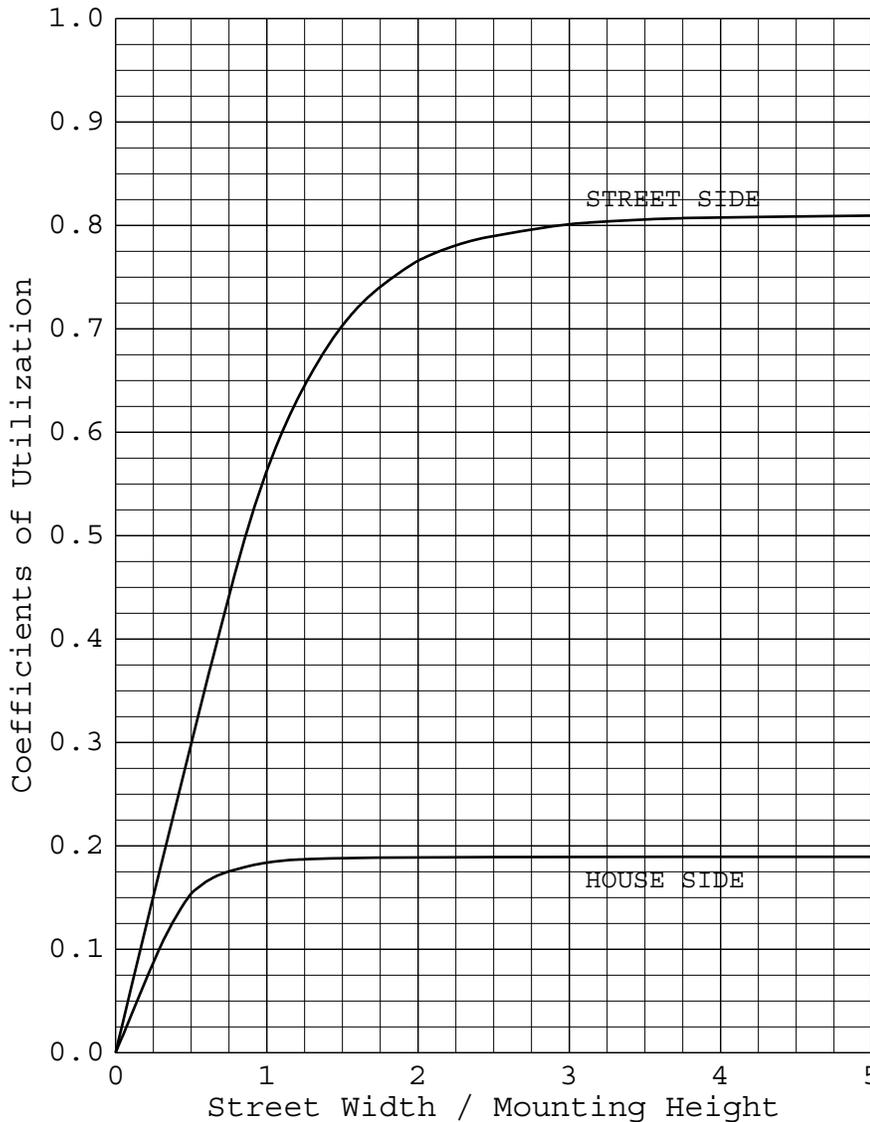
PAGE: 4 OF 10

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CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	13930	81.0
DOWNWARD HOUSE SIDE	3268	19.0
DOWNWARD TOTAL	17198	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	17198	100.0

EFFICACY = 127.9 lm/W

ALL CANDELA AND LUMENS IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.

REPORT NUMBER: PRORATED FROM RAB04286

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CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

BUG Rating Zonal Summary	Lumens	% of Fixture	Zone Ratings		
			B2	U0	G3
			B	U	G
Forward	13930	81.0			
FL (0° – 30°)	1566.3	9.1			
FM (30° – 60°)	6832.2	39.7			
FH (60° – 80°)	5436.4	31.6			G3
FVH (80° – 90°)	94.9	0.6			G1
Backward	3268	19.0			
BL (0° – 30°)	914.6	5.3	B2		
BM (30° – 60°)	1557.4	9.1	B2		
BH (60° – 80°)	781.0	4.5	B2		G2
BVH (80° – 90°)	15.0	0.1			G1
Upward	0	0.0			
UL (90° – 100°)	0.0	0.0		U0	
UH (100° – 180°)	0.0	0.0		U0	
Trapped Light	0	0.0			
Total Flux	17198	100.0			

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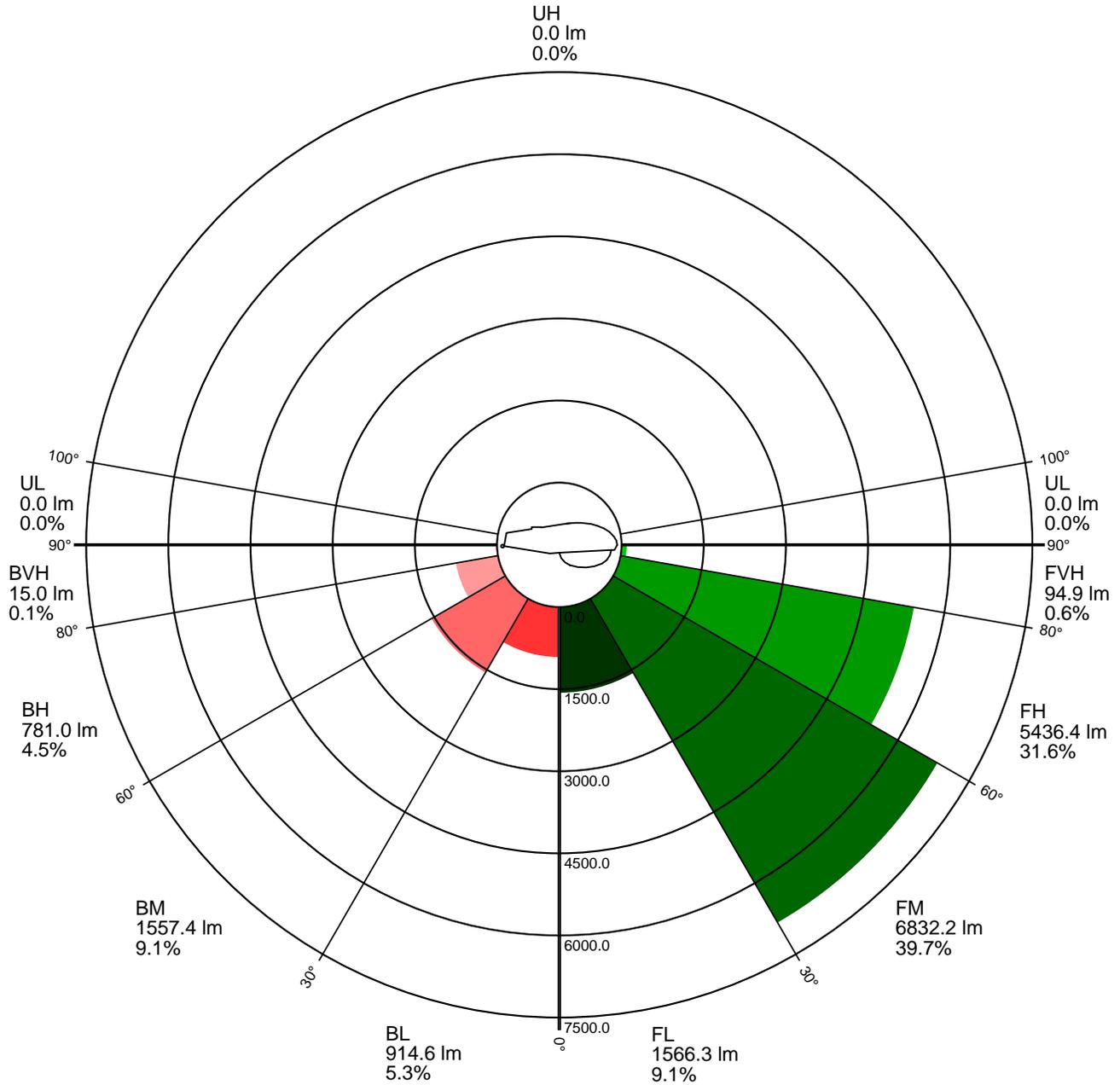
ISSUE DATE: 05/8/18

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

Zonal Lumen Summary

(Linear scale)



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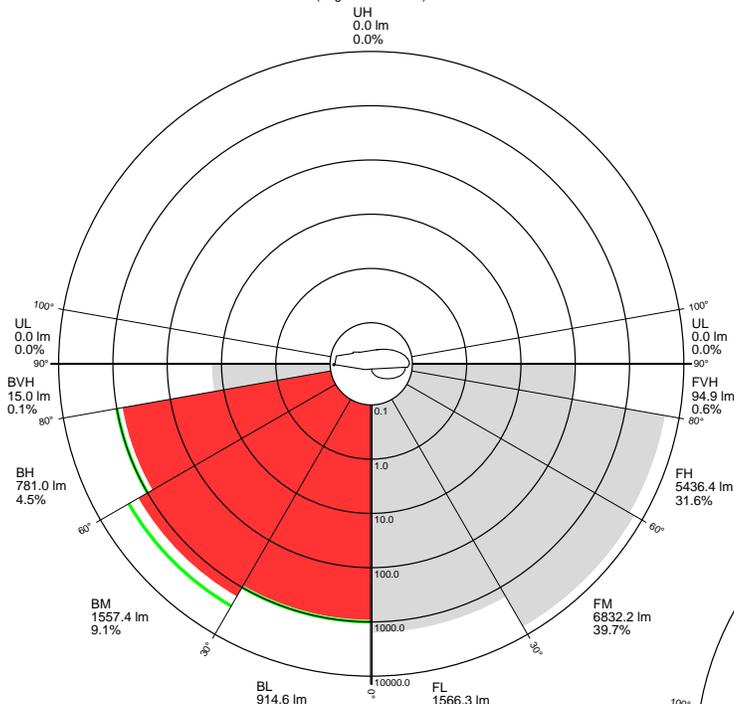
ISSUE DATE: 05/8/18

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

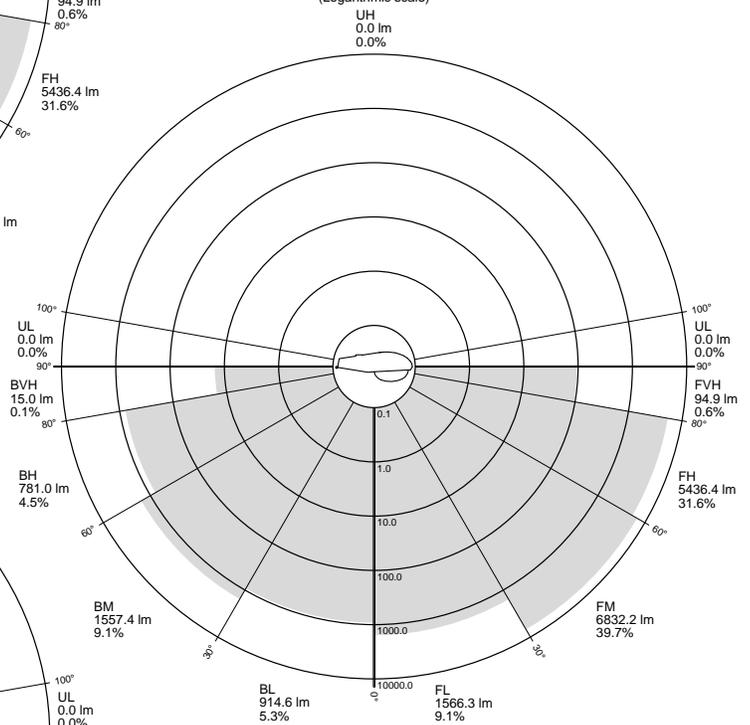
Backlight Rating Details

(Logarithmic scale)



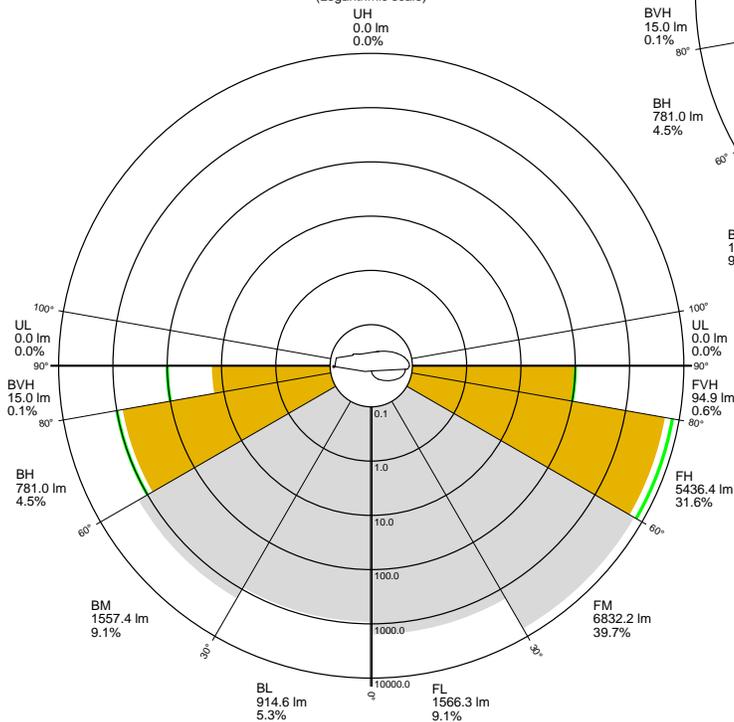
Uplight Rating Details

(Logarithmic scale)



Glare Rating Details

(Logarithmic scale)





REPORT NUMBER: PRORATED FROM RAB04286

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ISSUE DATE: 05/8/18

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

CANDELA TABULATION

	LATERAL ANGLE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	80.0	85.0
180.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
92.5	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
87.5	1.	1.	3.	5.	9.	11.	13.	31.	20.	16.	12.
85.0	4.	3.	7.	8.	13.	25.	86.	52.	58.	63.	58.
V 82.5	10.	6.	13.	21.	83.	190.	377.	469.	542.	487.	316.
E 80.0	21.	16.	70.	181.	311.	605.	1342.	1783.	2208.	1865.	1129.
R 77.5	38.	39.	235.	430.	789.	1576.	2963.	4856.	5922.	5640.	3710.
T 75.0	65.	121.	459.	874.	1607.	2670.	4448.	7592.	11459.	11130.	8309.
I 72.5	158.	293.	784.	1447.	2410.	3937.	6171.	8547.	14482.	15295.	12652.
C 70.0<<	367.	522.	1129.	2037.	3307.	5285.	7629.	9672.	14759.	15820.	14539.
A 67.5	709.	751.	1567.	2704.	4291.	6568.	8298.	10868.	12361.	13711.	13098.
L 65.0	1111.	1097.	2104.	3450.	5305.	7451.	8954.	11375.	11457.	10904.	10646.
62.5	1480.	1536.	2654.	4203.	5972.	7815.	9195.	11375.	10495.	9734.	8810.
A 60.0	1813.	1992.	3130.	4631.	6359.	7982.	9491.	10964.	10150.	9403.	8351.
N 57.5	2102.	2372.	3376.	4941.	6395.	7894.	9641.	10113.	9756.	9407.	8036.
G 55.0	2478.	2673.	3547.	4955.	6413.	7993.	9507.	9652.	9218.	8643.	7546.
L 52.5	2856.	2980.	3629.	5147.	6583.	8169.	9073.	9112.	8155.	7444.	6702.
E 50.0	3269.	3308.	3886.	5362.	6834.	8058.	8734.	8397.	7326.	6720.	5885.
47.5	3582.	3660.	4213.	5564.	6843.	7569.	8127.	7642.	6592.	6144.	5623.
45.0	3829.	3935.	4461.	5592.	6636.	7044.	7092.	6952.	6235.	5739.	5434.
42.5	4007.	4125.	4576.	5429.	6129.	6598.	6315.	6240.	5758.	5527.	5312.
40.0	4080.	4159.	4567.	5039.	5720.	6068.	6044.	5765.	5425.	5339.	5114.
37.5	4017.	4047.	4496.	4724.	5228.	5720.	5673.	5557.	5273.	5158.	4895.
35.0	3893.	3888.	4164.	4300.	4832.	5210.	5388.	5478.	5007.	4823.	4613.
32.5	3750.	3760.	4011.	4087.	4429.	4759.	5126.	5237.	4891.	4698.	4541.
30.0	3643.	3703.	3963.	4003.	4302.	4476.	4798.	4811.	4593.	4545.	4433.
25.0	3467.	3511.	3644.	3825.	3793.	3957.	4100.	4112.	4106.	4104.	3983.
20.0	3317.	3321.	3418.	3670.	3708.	3735.	3633.	3701.	3732.	3658.	3586.
15.0	3351.	3331.	3376.	3494.	3616.	3631.	3608.	3616.	3494.	3423.	3367.
10.0	3268.	3268.	3295.	3310.	3391.	3459.	3496.	3490.	3461.	3423.	3399.
5.0	3202.	3207.	3217.	3217.	3226.	3212.	3211.	3207.	3229.	3195.	3173.
0.0	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.

PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA



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CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

CANDELA TABULATION

	LATERAL ANGLE											
	HOUSE SIDE	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
	180.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	92.5	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	87.5	11.	9.	10.	8.	7.	7.	6.	4.	4.	4.	4.
	85.0	29.	19.	13.	11.	10.	10.	8.	5.	4.	4.	4.
V	82.5	248.	106.	75.	25.	15.	12.	10.	12.	12.	11.	10.
E	80.0	981.	531.	241.	88.	36.	13.	13.	15.	14.	12.	11.
R	77.5	2886.	1399.	234.	76.	35.	13.	13.	15.	14.	13.	12.
T	75.0	6014.	2344.	285.	115.	33.	22.	13.	14.	13.	13.	12.
I	72.5	9125.	3178.	1141.	286.	37.	26.	13.	13.	13.	12.	12.
C	70.0	<10684.	4070.	1660.	452.	57.	26.	14.	16.	15.	12.	12.
A	67.5	10105.	5078.	2553.	586.	76.	30.	16.	16.	17.	13.	12.
L	65.0	8566.	5024.	3296.	707.	189.	42.	25.	20.	19.	15.	13.
	62.5	7522.	5066.	2782.	824.	459.	83.	35.	25.	22.	19.	15.
A	60.0	7168.	5296.	2618.	1049.	777.	119.	47.	44.	48.	27.	18.
N	57.5	6737.	5255.	2380.	1149.	964.	257.	62.	52.	64.	31.	18.
G	55.0	6352.	5275.	2228.	1249.	963.	421.	87.	61.	83.	31.	21.
L	52.5	5819.	5193.	2479.	1470.	925.	531.	222.	75.	94.	31.	24.
E	50.0	5241.	4895.	2627.	1755.	991.	550.	351.	155.	66.	37.	29.
	47.5	5131.	4742.	2696.	1828.	1012.	536.	426.	268.	146.	88.	69.
	45.0	5091.	4612.	2808.	1820.	1040.	610.	438.	349.	289.	159.	127.
	42.5	4979.	4472.	2983.	1857.	1078.	691.	423.	362.	320.	208.	170.
	40.0	4802.	4296.	3270.	1953.	1172.	759.	490.	348.	305.	218.	185.
	37.5	4631.	4204.	3502.	2062.	1312.	838.	593.	410.	272.	219.	193.
	35.0	4363.	4169.	3510.	2218.	1414.	968.	665.	521.	329.	256.	230.
	32.5	4314.	4185.	3554.	2367.	1562.	1084.	759.	599.	417.	329.	300.
	30.0	4205.	4089.	3472.	2516.	1754.	1190.	855.	654.	471.	426.	400.
	25.0	3881.	3776.	3308.	2849.	2046.	1527.	1105.	824.	668.	620.	601.
	20.0	3542.	3500.	3166.	2804.	2403.	1923.	1568.	1257.	1080.	1027.	989.
	15.0	3337.	3329.	3160.	2947.	2744.	2515.	2208.	1901.	1751.	1736.	1685.
	10.0	3358.	3349.	3236.	3111.	2943.	2786.	2621.	2474.	2405.	2334.	2313.
	5.0	3141.	3127.	3089.	3064.	3025.	2956.	2910.	2897.	2859.	2842.	2815.
	0.0	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.	3122.

CONE OF MAXIMUM CANDELA



REPORT NUMBER: PRORATED FROM RAB04286

PAGE: 10 OF 10

ISSUE DATE: 05/8/18

PREPARED FOR: RAB LIGHTING INC.

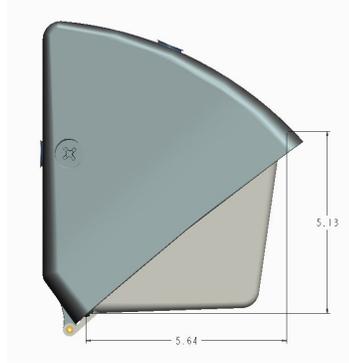
CATALOG NUMBER: ALED2T125Y - RWLED2T125Y - RWLED2T125SFY - WPLED2T125Y (TYPE II)

5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		74
5- 10		221
10- 15		363
15- 20		478
20- 25		598
25- 30		746
30- 35		911
35- 40		1094
40- 45		1297
45- 50		1514
50- 55		1704
55- 60		1870
60- 65		1945
65- 70		1953
70- 75		1607
75- 80		712
80- 85		104
85- 90		5
90- 95		0
95-100		0
100-105		0
105-110		0
110-115		0
115-120		0
120-125		0
125-130		0
130-135		0
135-140		0
140-145		0
145-150		0
150-155		0
155-160		0
160-165		0
165-170		0
170-175		0
175-180		0

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		296
0- 20		1137
0- 30		2481
0- 40		4486
0- 50		7297
0- 60		10870
0- 70		14769
0- 80		17088
0- 90		17198
0-100		17198
0-110		17198
0-120		17198
0-130		17198
0-140		17198
0-150		17198
0-160		17198
0-170		17198
0-180		17198

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 12 foot mounting height.



REPORT NUMBER: RAB03114
 ISSUE DATE: 03/28/17 PAGE: 1 OF 9
 DATE SAMPLE TESTED: 03/28/17
 CATALOG NUMBER: WP1LED30Y,
 WP1LED30Y/D10 (STANDARD CUTOFF -
 PRISMATIC LEXAN LENS)
 LUMINAIRE: COMPACT WALLPACK WITH VANDAL
 RESISTANT PRISMATIC POLYCARBONATE
 REFRACTOR.
 LAMP: SEVENTY TWO WHITE LIGHT EMITTING
 DIODES (LEDS).
 NOTE: THIS REPORT WITH THE USE OF THE
 NVLAP LOGO SHALL NOT BE USED BY THE
 CLIENT TO CLAIM PRODUCT
 CERTIFICATION, APPROVAL, OR
 ENDORSEMENT BY NVLAP, NIST, OR ANY
 AGENCY OF THE FEDERAL GOVERNMENT.
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE
 SAMPLE PROVIDED.
 (SEE PAGE 2 FOR MORE INFORMATION)

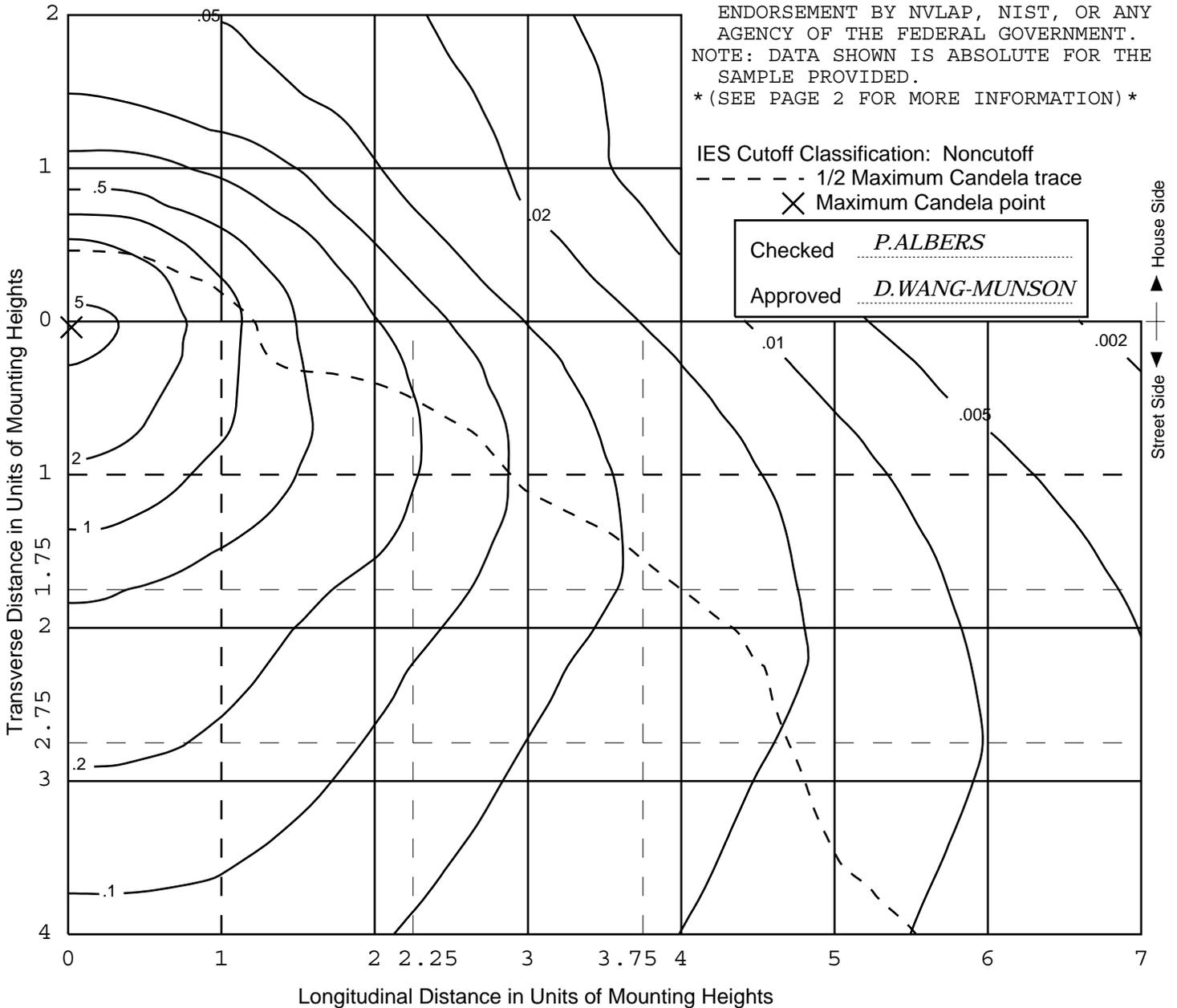
IES Cutoff Classification: Noncutoff

--- 1/2 Maximum Candela trace

× Maximum Candela point

Checked P.ALBERS

Approved D.WANG-MUNSON



REPORT NUMBER: RAB03114

PAGE: 2 OF 9

ISSUE DATE: 03/28/17

DATE SAMPLE TESTED: 03/28/17

CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC LEXAN L

ADDITIONAL INFORMATION

TOTAL INPUT WATTS = 30.285 W AT 277.0 VAC.

LED DRIVER: RDD-U26-A0720

TEST PROCEDURE: IESNA LM-79-08

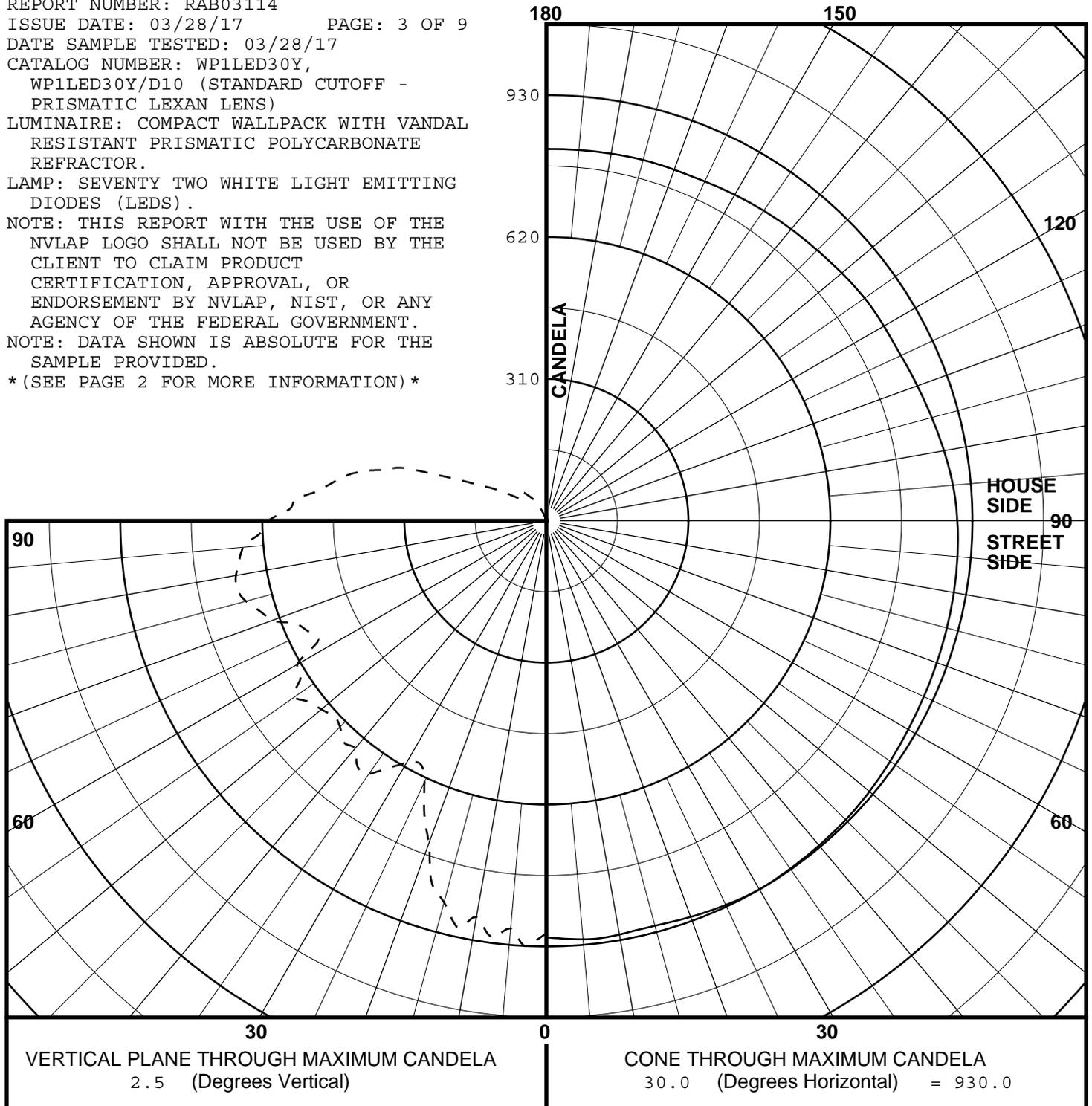
LM-80 DATA AVAILABLE FROM MANUFACTURER FOR SOLID STATE SOURCE

AMBIENT: 24.6

ACCREDITED LABORATORY CODE 201058-0

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

REPORT NUMBER: RAB03114
 ISSUE DATE: 03/28/17 PAGE: 3 OF 9
 DATE SAMPLE TESTED: 03/28/17
 CATALOG NUMBER: WP1LED30Y,
 WP1LED30Y/D10 (STANDARD CUTOFF -
 PRISMATIC LEXAN LENS)
 LUMINAIRE: COMPACT WALLPACK WITH VANDAL
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 NOTE: DATA SHOWN IS ABSOLUTE FOR THE
 SAMPLE PROVIDED.
 (SEE PAGE 2 FOR MORE INFORMATION)



REPORT NUMBER: RAB03114

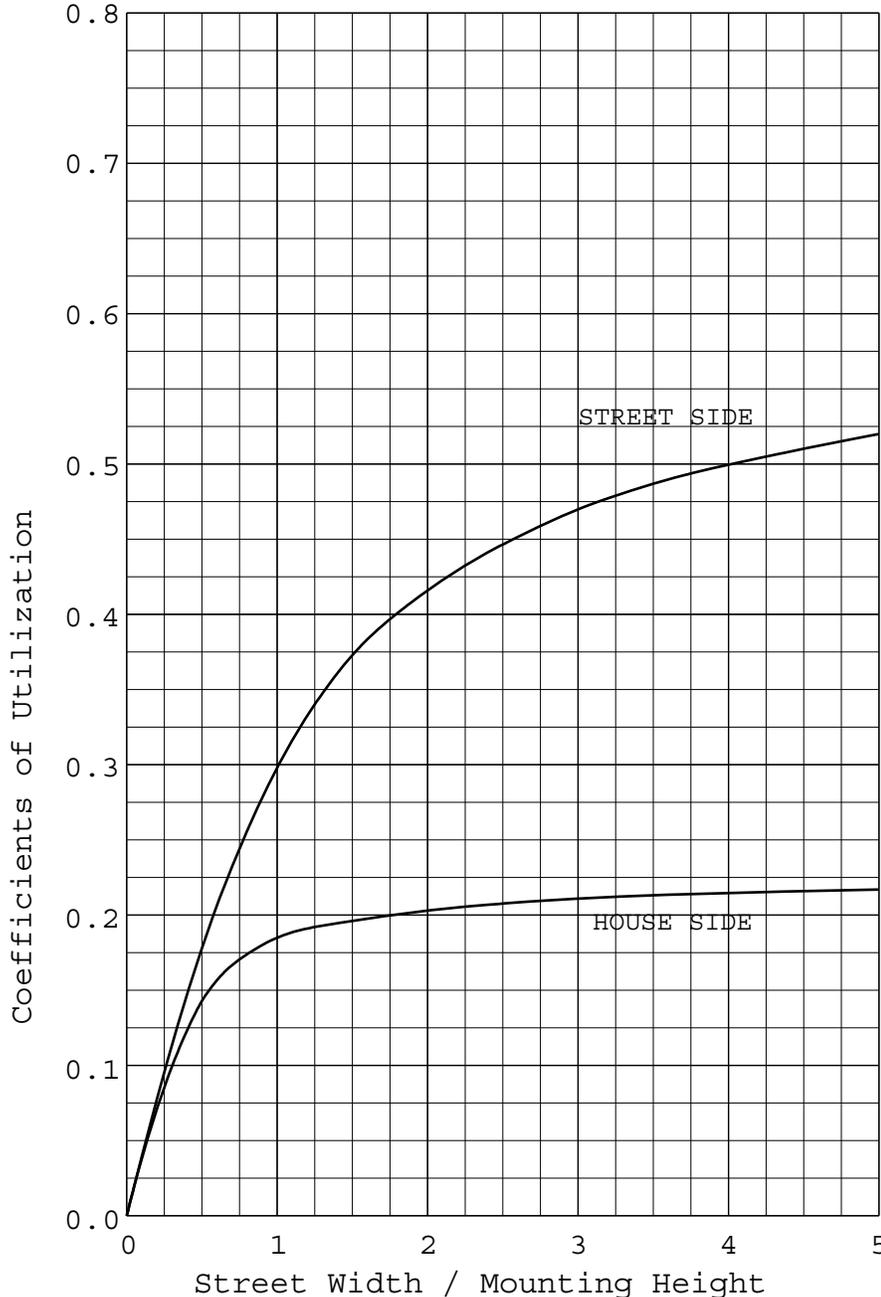
PAGE: 4 OF 9

ISSUE DATE: 03/28/17

DATE SAMPLE TESTED: 03/28/17

CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC LEXAN L

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	1895.	59.7
DOWNWARD HOUSE SIDE	705.	22.2
DOWNWARD TOTAL	2600.	81.9
UPWARD STREET SIDE	525.	16.5
UPWARD HOUSE SIDE	49.	1.5
UPWARD TOTAL	574.	18.1
TOTAL FLUX	3174.	100.0
TOTAL INPUT WATTS = 30.3		
EFFICACY = 104.8 Lm/W		

ALL CANDELA AND LUMENS IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.

REPORT NUMBER: RAB03114

ISSUE DATE: 03/28/17

CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC

PAGE: 5 OF 9

DATE SAMPLE TESTED: 03/28/17

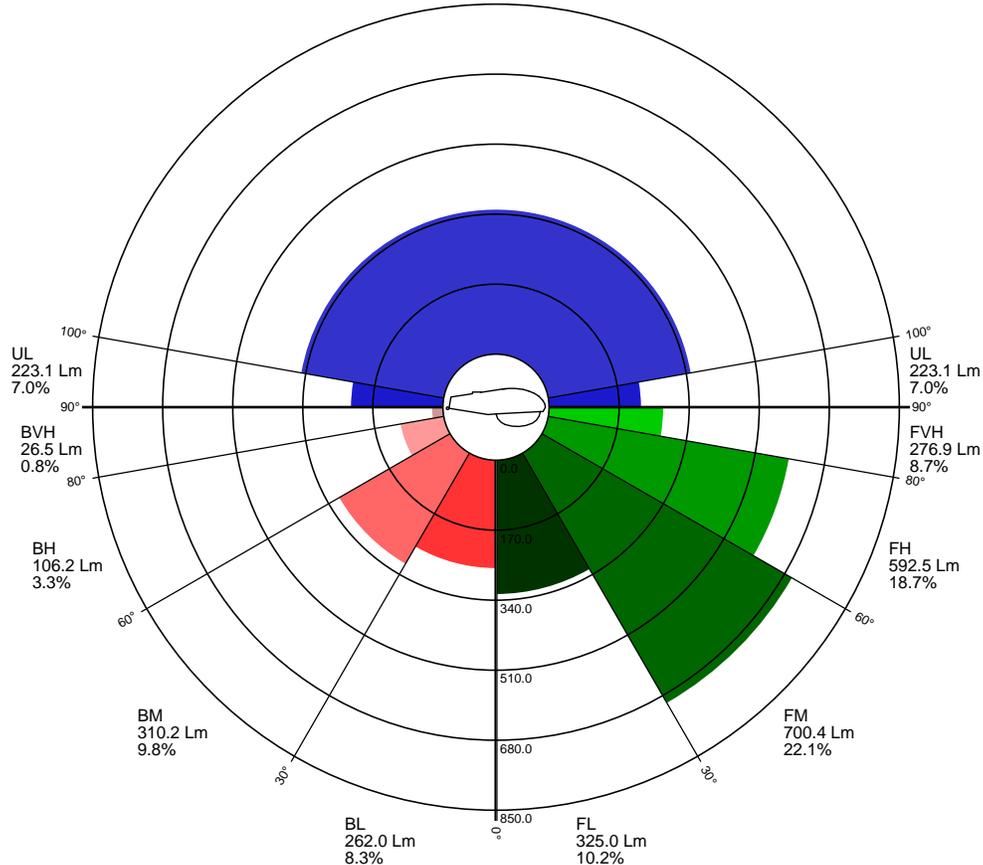
LEXAN LENS)
BUG-RAM)

Zonal Summary	Lumens	% of Fixture	Zone Ratings		
			B	U	G
Forward	1895	59.7			
FL (0° - 30°)	325.0	10.2			
FM (30° - 60°)	700.4	22.1			
FH (60° - 80°)	592.5	18.7			G0
FVH (80° - 90°)	276.9	8.7			G3
Backward	705	22.2			
BL (0° - 30°)	262.0	8.3	B1		
BM (30° - 60°)	310.2	9.8	B1		
BH (60° - 80°)	106.2	3.3	B0		G0
BVH (80° - 90°)	26.5	0.8			G1
Upward	574	18.1			
UL (90° - 100°)	223.1	7.0		U3	
UH (100° - 180°)	350.9	11.1		U3	
Trapped Light	0	0.0			
Total Flux	3174	100.0			

Zonal Lumen Summary

(Linear scale)

UH
350.9 Lm
11.1%



REPORT NUMBER: RAB03114

PAGE: 6 OF 9

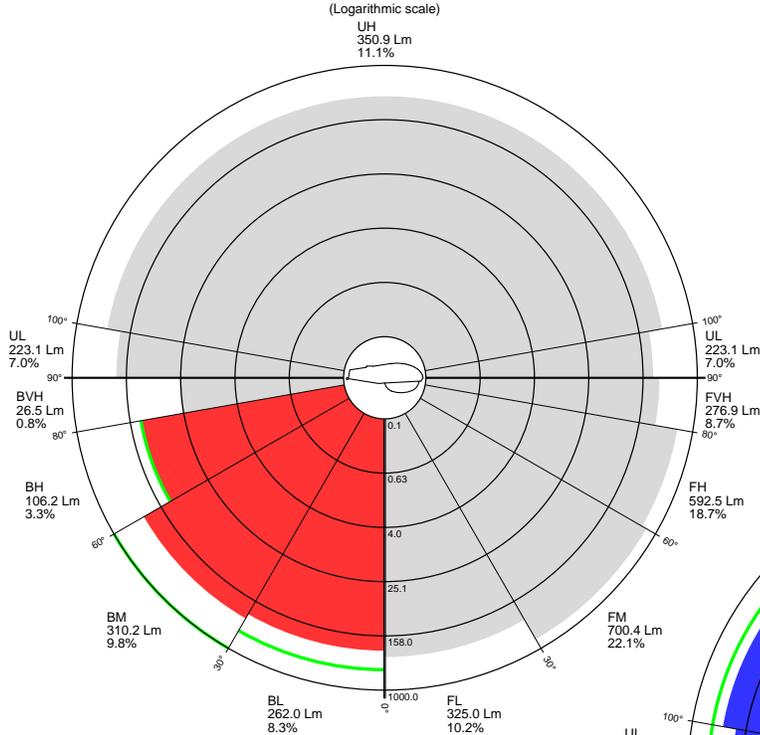
ISSUE DATE: 03/28/17

DATE SAMPLE TESTED: 03/28/17

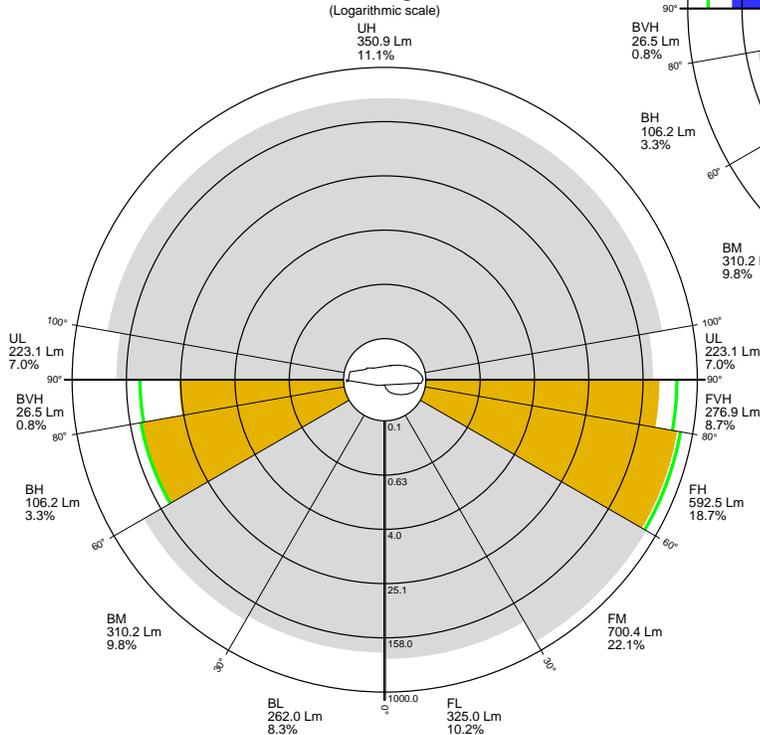
CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC

LEXAN LENS)

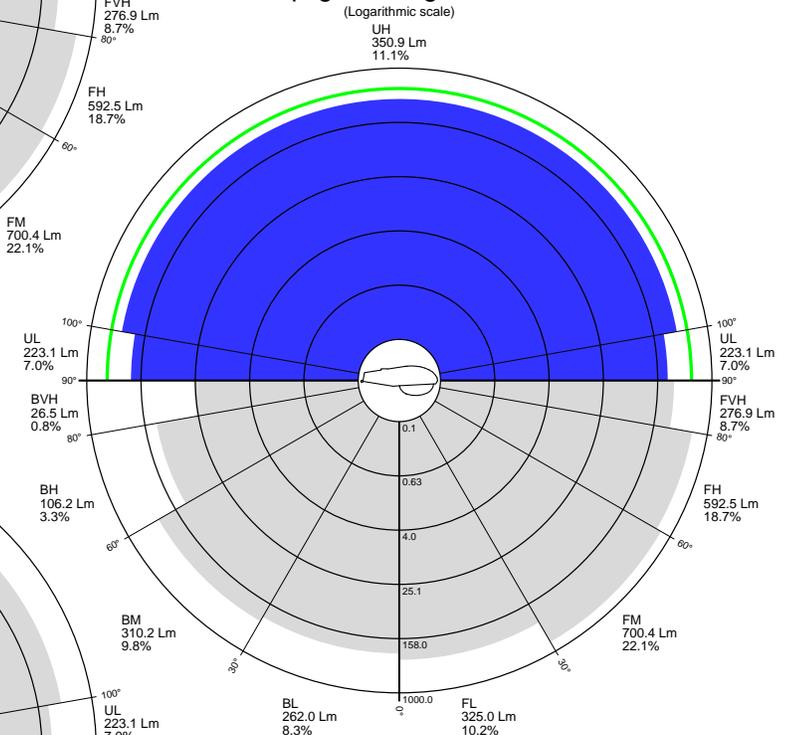
Backlight Rating Details



Glare Rating Details



Uplight Rating Details



REPORT NUMBER: RAB03114

PAGE: 7 OF 9

ISSUE DATE: 03/28/17

DATE SAMPLE TESTED: 03/28/17

CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC LEXAN L

CANDELA TABULATION

STREET SIDE	LATERAL ANGLE										
	0.0	5.0	15.0	25.0	30.0	35.0	45.0	55.0	65.0	75.0	85.0
	180.0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
	175.0	0.	0.	1.	1.	1.	1.	2.	2.	2.	2.
	165.0	0.	0.	0.	1.	1.	1.	1.	2.	2.	2.
	155.0	46.	43.	39.	33.	32.	25.	14.	8.	6.	4.
	145.0	74.	71.	65.	64.	66.	65.	59.	52.	36.	29.
	135.0	61.	61.	63.	71.	76.	81.	85.	89.	76.	59.
	125.0	123.	124.	124.	111.	103.	96.	90.	87.	89.	84.
	115.0	318.	317.	307.	235.	212.	185.	136.	114.	93.	77.
	105.0	437.	443.	498.	426.	417.	383.	273.	175.	99.	71.
	95.0	601.	604.	614.	566.	547.	498.	439.	327.	188.	90.
	90.0	761.	758.	741.	644.	607.	546.	487.	406.	271.	142.
	87.5	754.	759.	771.	715.	625.	581.	511.	427.	321.	183.
	85.0	794.	797.	836.	712.	665.	604.	521.	439.	363.	225.
	82.5	896.	888.	820.	747.	677.	630.	540.	451.	405.	263.
V	80.0	897.	883.	841.	738.	688.	636.	542.	471.	452.	304.
E	77.5	883.	893.	831.	758.	691.	634.	537.	483.	476.	355.
R	75.0	828.	838.	844.	733.	679.	618.	533.	493.	512.	391.
T	72.5	844.	846.	815.	725.	656.	608.	527.	510.	503.	421.
I	70.0	821.	829.	806.	684.	637.	565.	521.	584.	538.	464.
C	67.5	759.	770.	730.	669.	588.	551.	536.	602.	575.	494.
A	65.0	710.	723.	702.	582.	573.	538.	629.	632.	544.	494.
L	62.5	646.	639.	603.	593.	561.	612.	629.	626.	595.	529.
	60.0	643.	647.	623.	618.	628.	612.	641.	625.	591.	478.
A	57.5	632.	646.	667.	623.	635.	687.	645.	632.	571.	475.
N	55.0	633.	627.	643.	695.	672.	605.	603.	616.	598.	475.
G	52.5	706.	719.	717.	637.	651.	646.	614.	628.	596.	480.
L	50.0	698.	689.	673.	692.	641.	599.	576.	603.	570.	484.
E	47.5	718.	721.	699.	651.	630.	650.	638.	645.	510.	498.
	45.0	690.	684.	665.	680.	637.	613.	605.	584.	501.	517.
	42.5	702.	691.	678.	655.	655.	673.	661.	583.	507.	545.
	40.0	692.	685.	671.	716.	649.	621.	610.	530.	539.	568.
	37.5	731.	701.	692.	666.	677.	672.	622.	519.	559.	594.
	35.0	687.	673.	690.	708.	675.	609.	590.	563.	614.	638.
	30.0	626.	617.	637.	653.	610.	599.	579.	650.	685.	701.
	25.0	644.	642.	618.	620.	630.	673.	694.	753.	775.	755.
	20.0	722.	720.	707.	746.	750.	798.	792.	836.	811.	827.
	15.0	819.	814.	825.	845.	863.	872.	894.	848.	882.	866.
	10.0	852.	854.	844.	854.	879.	902.	915.	928.	898.	896.
	5.0	909.	910.	908.	899.	894.	891.	872.	878.	907.	913.
	2.5<<	910.	918.	916.	926.	930.	928.	924.	916.	909.	905.
	0.0	901.	901.	901.	901.	901.	901.	901.	901.	901.	901.

||
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA

REPORT NUMBER: RAB03114

PAGE: 8 OF 9

ISSUE DATE: 03/28/17

DATE SAMPLE TESTED: 03/28/17

CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC LEXAN L

CANDELA TABULATION

	LATERAL ANGLE											
	HOUSE SIDE	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
	180.0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
	175.0	2.	2.	2.	2.	1.	1.	1.	1.	0.	0.	0.
	165.0	2.	2.	2.	2.	2.	1.	1.	1.	1.	0.	0.
	155.0	4.	3.	3.	2.	2.	1.	1.	1.	1.	0.	1.
	145.0	15.	12.	8.	8.	6.	4.	1.	1.	1.	1.	1.
	135.0	26.	21.	16.	15.	11.	7.	3.	1.	1.	1.	1.
	125.0	37.	30.	23.	21.	17.	11.	6.	2.	1.	1.	1.
	115.0	48.	41.	32.	28.	22.	15.	10.	4.	2.	2.	2.
	105.0	50.	49.	43.	35.	29.	22.	14.	7.	3.	3.	3.
	95.0	46.	48.	50.	47.	45.	39.	25.	12.	4.	4.	4.
	90.0	46.	45.	51.	57.	60.	53.	35.	15.	5.	4.	4.
	87.5	53.	47.	54.	63.	69.	61.	40.	17.	6.	4.	4.
	85.0	62.	52.	58.	69.	79.	72.	49.	23.	9.	7.	6.
	82.5	76.	61.	63.	74.	90.	81.	62.	36.	21.	16.	15.
V	80.0	97.	73.	67.	78.	94.	87.	72.	50.	36.	33.	32.
E	77.5	129.	90.	71.	85.	92.	96.	76.	68.	50.	47.	47.
R	75.0	164.	112.	78.	90.	92.	105.	83.	73.	69.	58.	56.
T	72.5	205.	140.	88.	93.	92.	102.	92.	74.	82.	87.	78.
I	70.0	245.	174.	103.	97.	96.	97.	108.	80.	75.	90.	98.
C	67.5	284.	211.	125.	105.	102.	94.	106.	94.	74.	63.	64.
A	65.0	312.	245.	155.	115.	107.	93.	95.	106.	82.	66.	65.
L	62.5	347.	277.	190.	129.	115.	97.	89.	102.	105.	94.	92.
	60.0	362.	322.	232.	154.	126.	100.	86.	90.	107.	111.	113.
A	57.5	395.	351.	273.	185.	133.	107.	87.	78.	85.	92.	94.
N	55.0	421.	398.	315.	220.	147.	120.	93.	76.	72.	72.	72.
G	52.5	443.	427.	356.	257.	173.	135.	109.	85.	74.	68.	68.
L	50.0	473.	457.	396.	298.	206.	154.	128.	101.	85.	75.	73.
E	47.5	498.	478.	427.	344.	241.	181.	151.	121.	102.	92.	90.
	45.0	512.	498.	454.	386.	291.	218.	176.	146.	123.	111.	108.
	42.5	539.	521.	479.	416.	347.	267.	212.	172.	149.	133.	129.
	40.0	554.	543.	497.	446.	391.	334.	258.	198.	174.	159.	155.
	37.5	574.	568.	519.	473.	423.	386.	326.	241.	205.	186.	182.
	35.0	616.	586.	544.	499.	449.	422.	371.	331.	255.	233.	226.
	30.0	683.	666.	604.	563.	507.	496.	461.	431.	421.	382.	374.
	25.0	750.	751.	670.	614.	570.	526.	500.	489.	434.	429.	431.
	20.0	814.	805.	734.	675.	612.	578.	531.	549.	497.	477.	478.
	15.0	886.	868.	792.	768.	713.	624.	618.	577.	554.	538.	534.
	10.0	902.	881.	815.	805.	788.	768.	750.	688.	640.	641.	641.
	5.0	905.	890.	855.	817.	795.	802.	808.	809.	816.	813.	811.
	2.5<<	897.	891.	871.	854.	848.	836.	827.	818.	816.	813.	812.
	0.0	901.	901.	901.	901.	901.	901.	901.	901.	901.	901.	901.

CONE OF MAXIMUM CANDELA

REPORT NUMBER: RAB03114
ISSUE DATE: 03/28/17
PREPARED FOR: RAB LIGHTING INC.

PAGE: 9 OF 9
DATE SAMPLE TESTED: 03/28/17

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	21
5- 10	61
10- 15	94
15- 20	121
20- 25	138
25- 30	152
30- 35	162
35- 40	166
40- 45	168
45- 50	170
50- 55	172
55- 60	173
60- 65	173
65- 70	176
70- 75	177
75- 80	172
80- 85	161
85- 90	143
90- 95	122
95-100	101
100-105	85
105-110	70
110-115	54
115-120	38
120-125	28
125-130	21
130-135	17
135-140	14
140-145	11
145-150	7
150-155	4
155-160	1
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	81
0- 20	296
0- 30	587
0- 40	915
0- 50	1253
0- 60	1597
0- 70	1947
0- 80	2296
0- 90	2600
0-100	2823
0-110	2978
0-120	3071
0-130	3120
0-140	3150
0-150	3168
0-160	3173
0-170	3173
0-180	3174

REPORT NUMBER: RAB03115
DATE: 3/27/2017
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC LEXAN LENS)

ADDRESS: 170 LUDLOW AVE, NORTHVALE, NJ 07647

LUMINAIRE: COMPACT WALLPACK WITH VANDAL RESISTANT PRISMATIC POLYCARBONATE REFRACTOR.

LAMP: SEVENTY TWO WHITE LIGHT EMITTING DIODES (LEDS).

DRIVER: RD-042-A0700N

OBJECT OF TEST: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT THE RATED INPUT VOLTAGES (277.0 AND 120.0 VAC, 60Hz) TO THE TEST SAMPLE.

INSTRUMENTS:	GWINSTEK PROGRAMMABLE AC POWER SOURCE APS-7100	Calibration Due: N/A
	CHROMA PROGRAMMABLE DIGITAL POWER METER MODEL 66202	3/01/18
	OCEAN OPTICS QE65PRO Spectroradiometer	03/07/18
	RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry	03/07/18

OBJECT OF TEST: Measure the Absolute Flux in lumens*, Total Radiant Flux*, Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRIa,1-14), Chromaticity Coordinates (x,y; u'v'), ANSI C78.377 Duv, and electrical data including ANSI C82.77-2002 Power Factor (PF), and Total Harmonic Distortion (THD) to the test sample. Measure electrical data including Total Harmonic Distortion (THD) at maximum nominal rated input voltage. Report Off-State Power.

PROCEDURE: The test sample was mounted inside the integrating sphere, energized, and allowed to stabilize. After stabilization occurred, measurements were taken. In order to measure mean performance, multiple data sets were recorded and averaged. Readings were taken with the test sample operating at 60 HZ input in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. Electrical data was also recorded at maximum nominal rated input voltage (120.0 VAC). All data are traceable to the National Institute of Standards and Technology. Off-State Power was reported with no voltage applied to the sample.

*NOTE: Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results.

RESULTS: (continued subsequent pages)

Checked	<u>X.CAO</u>
Approved	<u>D.WANG-MUNSON</u> Lighting Engineer

REPORT NUMBER: RAB03115
 DATE: 3/27/2017
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: WP1LED30Y, WP1LED30Y/D10 (STANDARD CUTOFF - PRISMATIC LEXAN LENS)

RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	3174 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4289
Chromaticity Ordinate y	0.3962
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2487
Chromaticity Ordinate v'	0.5171
Correlated Color Temp CCT (K)	3074
ANSI C78.377-2008 Duv	-0.002
Total Radiant Flux (milliWatts)	9918 *
ELECTRICAL	
Input Voltage (Volts AC)	277.0
Input Current (Amps AC)	0.120
Input Power (Watts)	30.3
Input Power Factor (%)	91.0
Input Current THD (%)	17.2
Input Voltage THD (%)	0.2
EFFICACY (Lumens/Watt)	
	104.8
ELECTRICAL AT MAX NONIMAL INPUT	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.254
Input Power (Watts)	30.2
Input Power Factor (%)	99.2
Input Current THD (%)	7.6
Input Voltage THD (%)	0.2
Off-State Power (Watts)	0.0

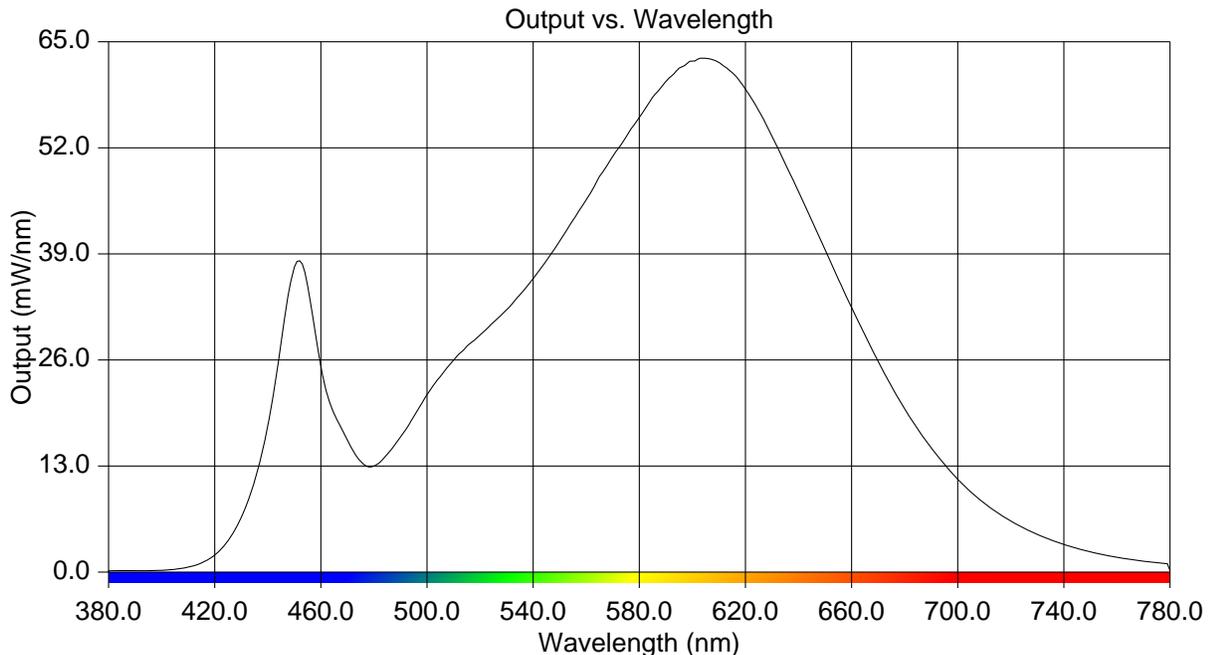
COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	83
R1 Light greyish red	82
R2 Dark greyish yellow	91
R3 Strong yellowish green	96
R4 Moderate yellowish green	81
R5 Light bluish green	82
R6 Light blue	89
R7 Light violet	83
R8 Light reddish purple	62
R9 Strong red	14
R10 Strong yellow	80
R11 Strong green	80
R12 Strong blue	73
R13 Light yellowish pink (skin)	84
R14 Moderate olive green (leaf)	99

*NOTE: Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results.

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.149	515	27.679	650	39.505
385	0.161	520	29.074	655	35.902
390	0.164	525	30.612	660	32.484
395	0.178	530	32.149	665	29.074
400	0.223	535	33.992	670	25.824
405	0.340	540	35.986	675	22.780
410	0.595	545	38.183	680	20.040
415	1.119	550	40.544	685	17.490
420	2.087	555	43.129	690	15.216
425	3.821	560	45.599	695	13.219
430	6.697	565	48.510	700	11.401
435	11.133	570	50.984	705	9.825
440	17.937	575	53.325	710	8.434
445	27.988	580	55.730	715	7.293
450	37.373	585	58.195	720	6.268
455	35.109	590	60.128	725	5.372
460	25.214	595	61.765	730	4.612
465	19.408	600	62.634	735	3.928
470	16.169	605	62.988	740	3.360
475	13.572	610	62.474	745	2.884
480	12.991	615	61.224	750	2.481
485	14.428	620	59.187	755	2.125
490	16.539	625	56.639	760	1.827
495	19.063	630	53.397	765	1.567
500	21.753	635	50.109	770	1.350
505	23.961	640	46.655	775	1.158
510	25.970	645	43.087	780	0.175



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CIE Chromaticity Diagram

