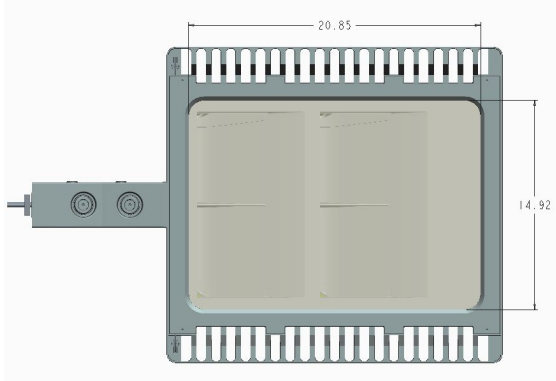


ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 25 foot mounting height.



REPORT NUMBER: RAB01839
ISSUE DATE: 04/11/16 PAGE: 1 OF 9
DATE SAMPLE TESTED: 04/11/16
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: ALED3T260/D10 -
ALED3T260SF/D10 - WPLED3T260/D10 -
WPLED3T260FX/D10 (TYPE III)
LUMINAIRE: CAST FINNED METAL HOUSING, 4
CHIP ON BOARD LIGHT EMITTING DIODES,
MOLDED PLASTIC REFLECTOR WITH
SPECULAR FINISH, CLEAR GLASS LENS IN
CAST BRONZE PAINTED METAL FRAME.
LAMPS: FOUR WHITE LIGHT EMITTING DIODES
(LEDS)

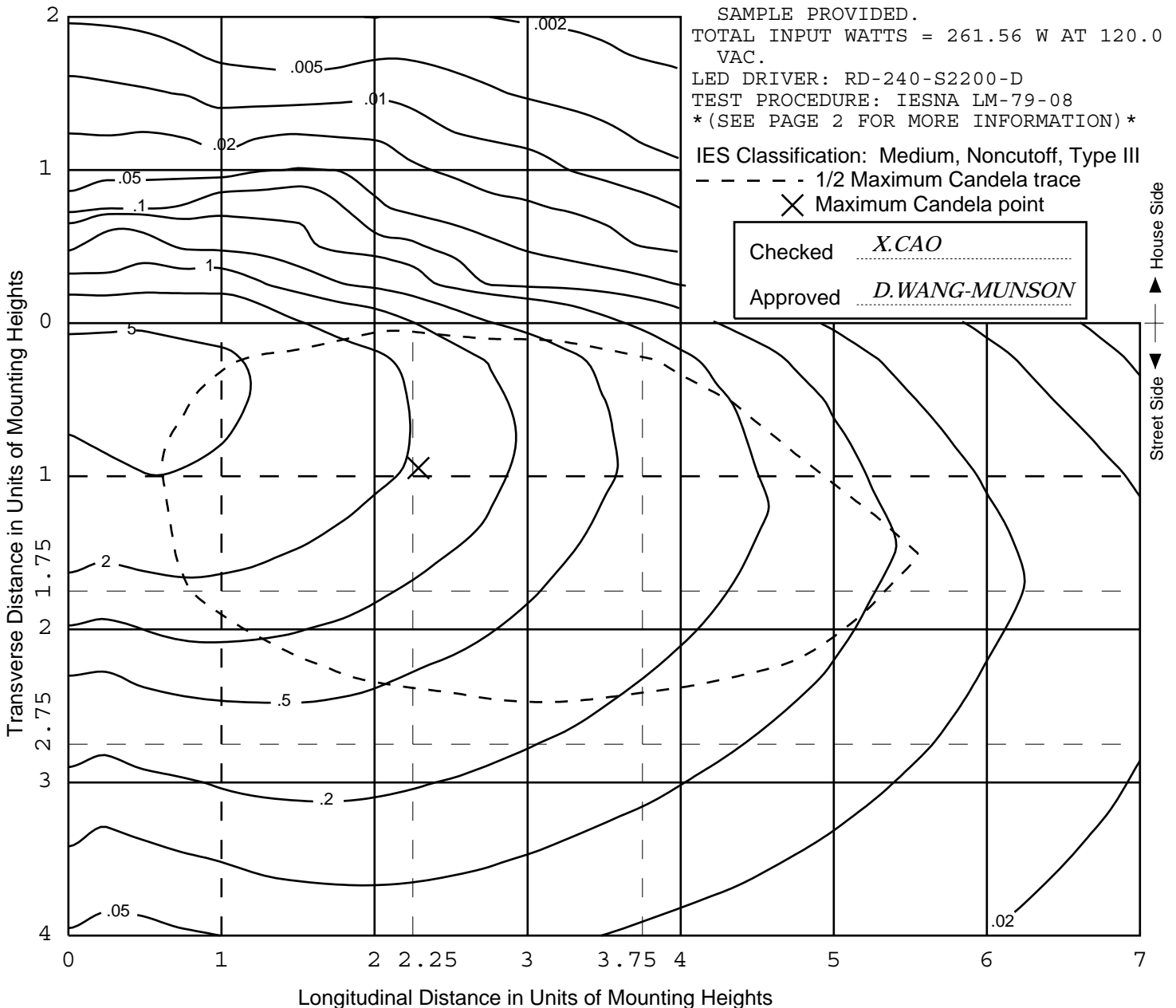
NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED.
TOTAL INPUT WATTS = 261.56 W AT 120.0
VAC.

LED DRIVER: RD-240-S2200-D
TEST PROCEDURE: IESNA LM-79-08
(SEE PAGE 2 FOR MORE INFORMATION)

IES Classification: Medium, Noncutoff, Type III

--- 1/2 Maximum Candela trace

X Maximum Candela point



REPORT NUMBER: RAB01839
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PREPARED FOR: RAB LIGHTING INC.

PAGE: 2 OF 9
DATE SAMPLE TESTED: 04/11/16

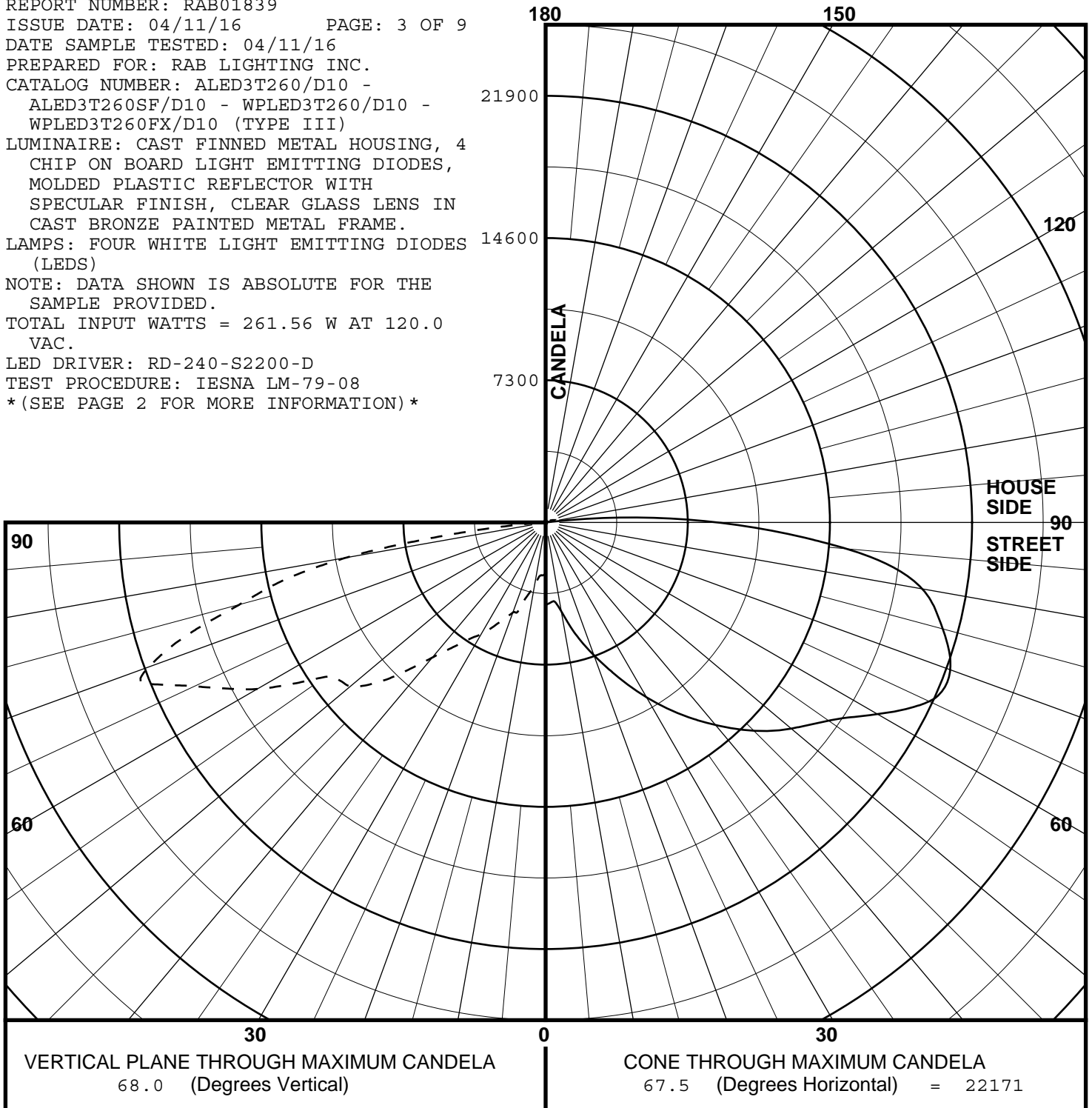
ADDITIONAL INFORMATION

ACCREDITED LABORATORY CODE 201058-0
TEST DISTANCE : 28.25 FEET

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.

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

REPORT NUMBER: RAB01839
 ISSUE DATE: 04/11/16 PAGE: 3 OF 9
 DATE SAMPLE TESTED: 04/11/16
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: ALED3T260/D10 -
 ALED3T260SF/D10 - WPLED3T260/D10 -
 WPLED3T260FX/D10 (TYPE III)
 LUMINAIRE: CAST FINNED METAL HOUSING, 4
 CHIP ON BOARD LIGHT EMITTING DIODES,
 MOLDED PLASTIC REFLECTOR WITH
 SPECULAR FINISH, CLEAR GLASS LENS IN
 CAST BRONZE PAINTED METAL FRAME.
 LAMPS: FOUR WHITE LIGHT EMITTING DIODES (LEDs)
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE
 SAMPLE PROVIDED.
 TOTAL INPUT WATTS = 261.56 W AT 120.0
 VAC.
 LED DRIVER: RD-240-S2200-D
 TEST PROCEDURE: IESNA LM-79-08
 (SEE PAGE 2 FOR MORE INFORMATION)



REPORT NUMBER: RAB01839

PAGE: 4 OF 9

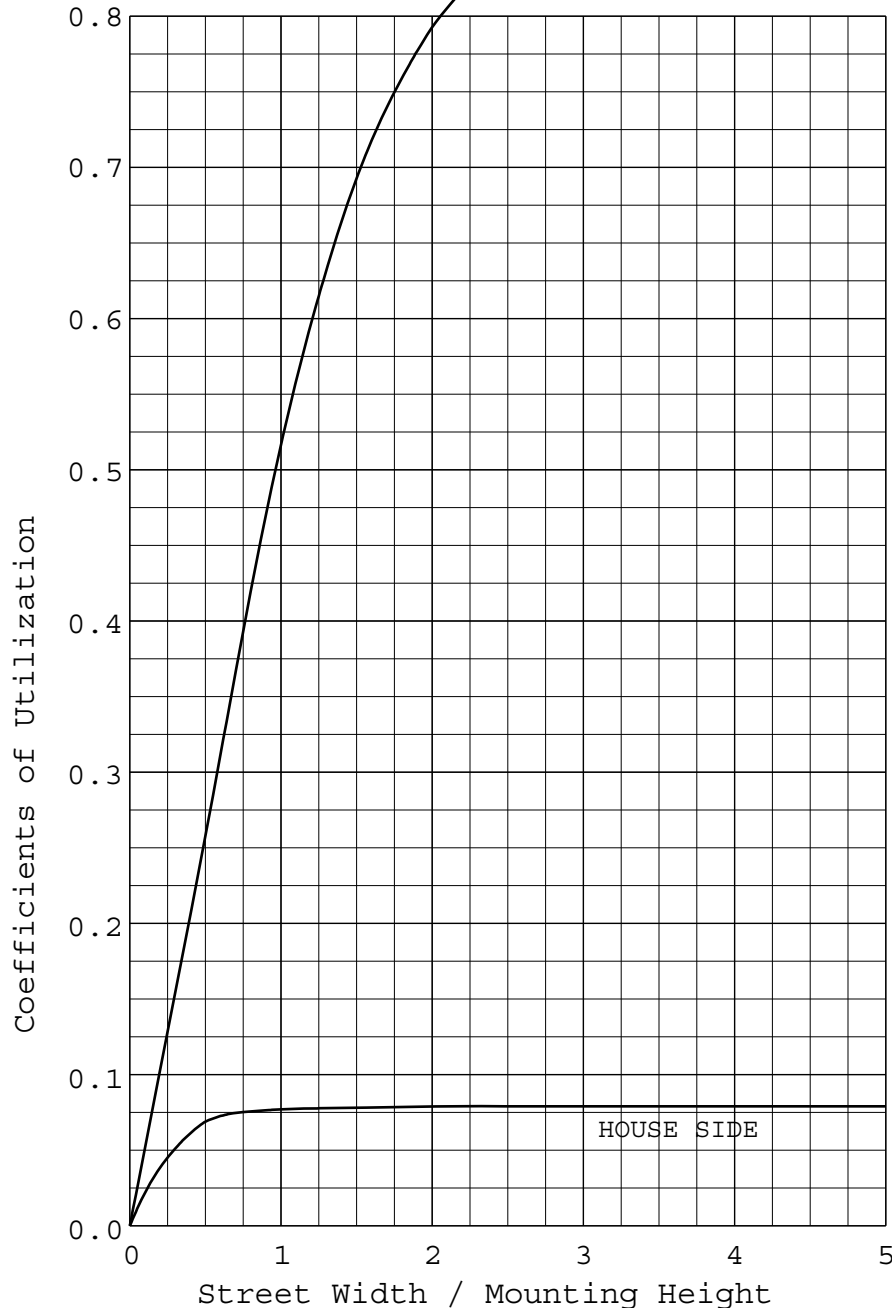
ISSUE DATE: 04/11/16

STREET SIDE

DATE SAMPLE TESTED: 04/11/16

PREPARED FOR: RAB LIGHTING INC.

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	25765.	91.9
DOWNWARD HOUSE SIDE	2271.	8.1
DOWNWARD TOTAL	28037.	100.0
UPWARD STREET SIDE	0.	0.0
UPWARD HOUSE SIDE	0.	0.0
UPWARD TOTAL	0.	0.0
TOTAL FLUX	28037.	100.0
TOTAL INPUT WATTS = 261.6		
EFFICACY = 107.2 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: RAB01839
 ISSUE DATE: 04/11/16
 PREPARED FOR: RAB LIGHTING INC.

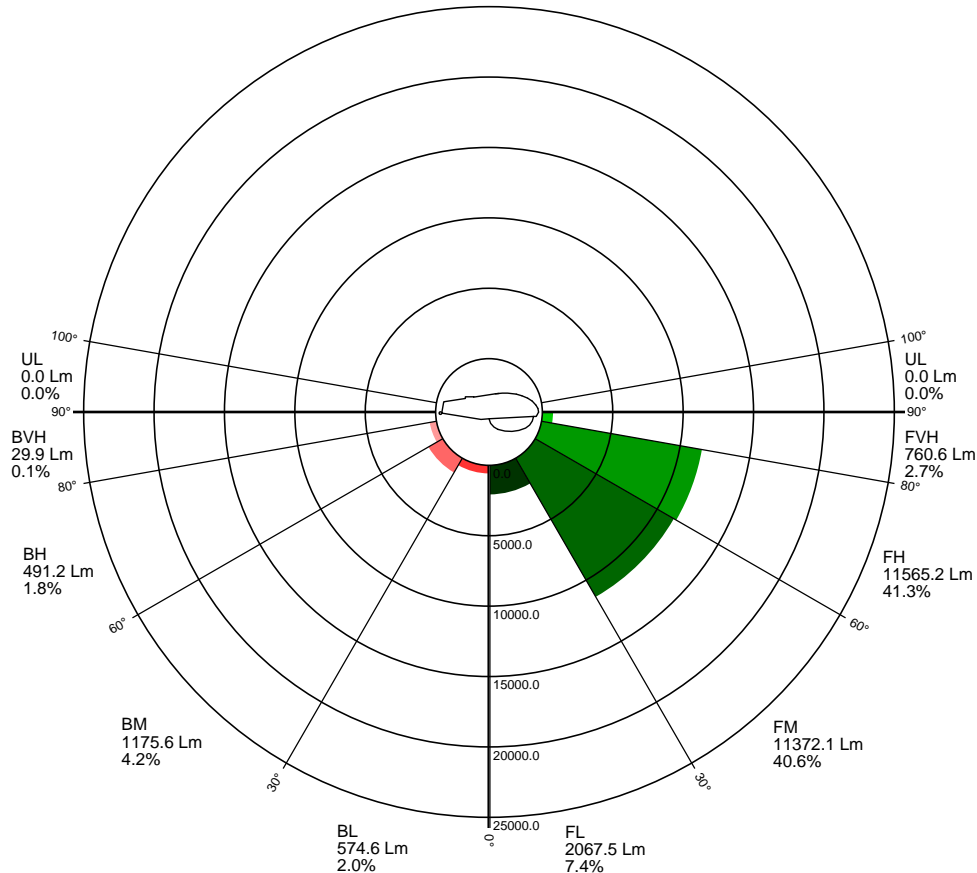
PAGE: 5 OF 9
 DATE SAMPLE TESTED: 04/11/16

BUG Rating:				B2 U0 G5		
Zonal Summary		Lumens	% of Fixture	Zone Ratings		
				B	U	G
Forward		25765	91.9			
FL	(0° - 30°)	2067.5	7.4			
FM	(30° - 60°)	11372.1	40.6			
FH	(60° - 80°)	11565.2	41.3			G4
FVH	(80° - 90°)	760.6	2.7			G5
Backward		2271	8.1			
BL	(0° - 30°)	574.6	2.0	B2		
BM	(30° - 60°)	1175.6	4.2	B2		
BH	(60° - 80°)	491.2	1.8	B1		G1
BVH	(80° - 90°)	29.9	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		28037	100.0			

Zonal Lumen Summary

(Linear scale)

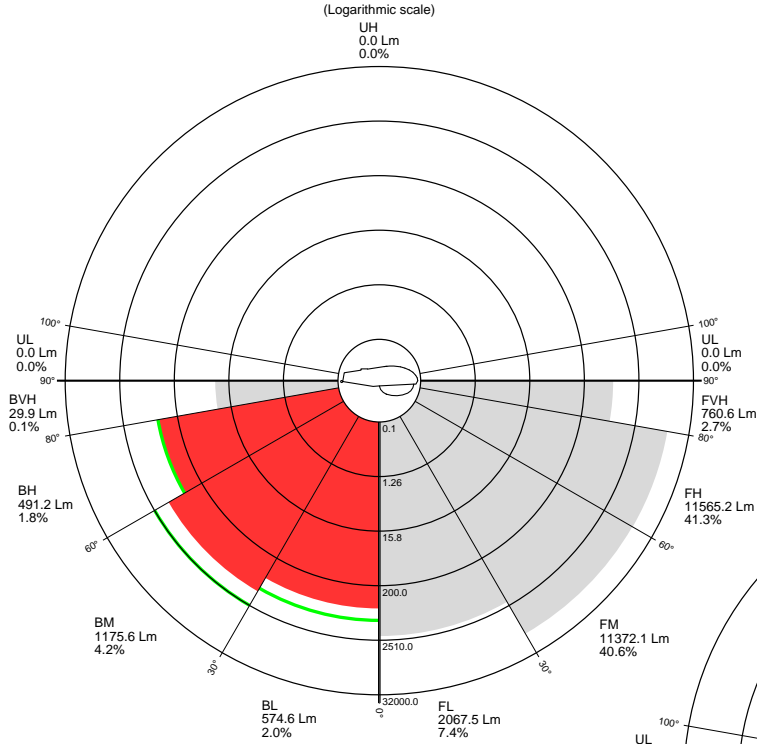
UH
0.0 Lm
0.0%



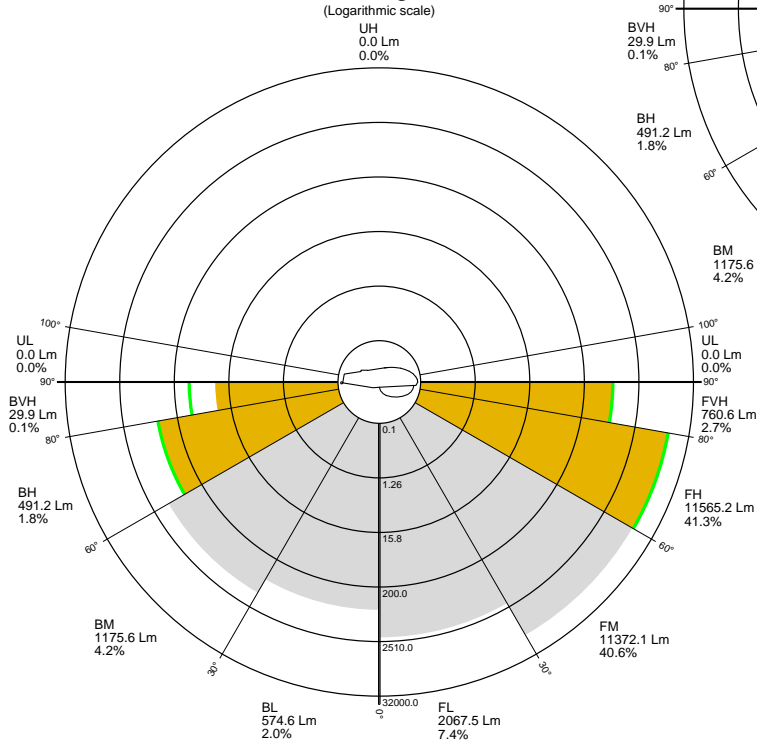
REPORT NUMBER: RAB01839
 ISSUE DATE: 04/11/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 6 OF 9
 DATE SAMPLE TESTED: 04/11/16

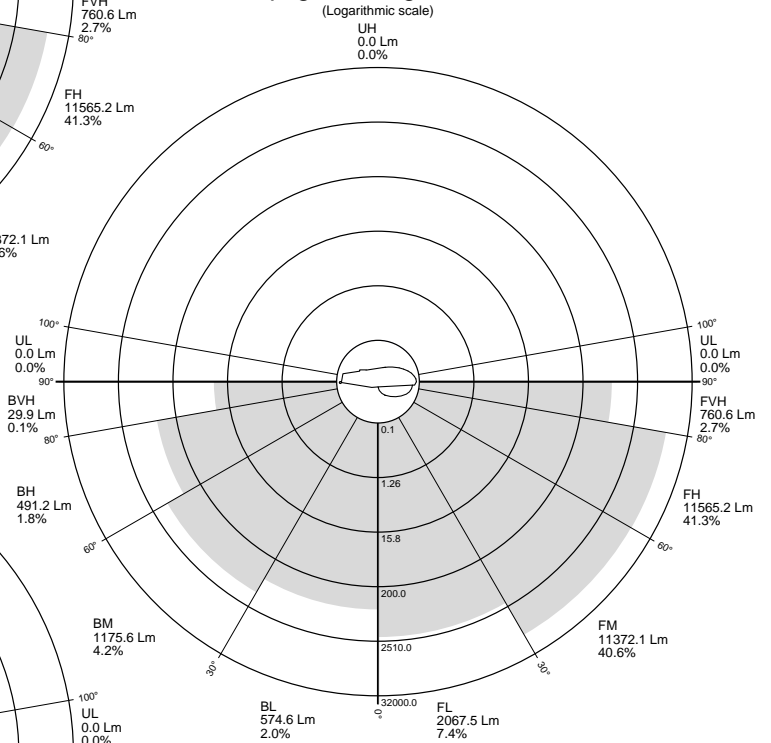
Backlight Rating Details



Glare Rating Details



Uplight Rating Details



REPORT NUMBER: RAB01839
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 PREPARED FOR: RAB LIGHTING INC.

PAGE: 7 OF 9
 DATE SAMPLE TESTED: 04/11/16

CANDELA TABULATION

	STREET SIDE	LATERAL ANGLE										
		0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	67.5	75.0	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.
	90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	87.5	25.	25.	28.	32.	43.	62.	74.	212.	238.	321.	207.
	85.0	33.	35.	46.	80.	160.	520.	1208.	1644.	1677.	2012.	606.
	82.5	49.	54.	114.	406.	1035.	2080.	4120.	5296.	5421.	6229.	1964.
V	80.0	178.	242.	791.	1850.	3178.	4945.	7357.	10026.	10385.	11415.	5174.
E	77.5	1297.	1091.	1948.	3732.	5474.	7485.	10247.	13268.	13864.	15004.	9458.
R	75.0	2463.	2006.	3135.	5030.	7225.	9738.	13302.	15801.	16274.	17755.	13559.
T	72.5	3081.	2656.	4004.	6235.	9128.	11994.	15847.	19058.	19377.	19869.	15828.
I	70.0	3825.	3500.	5041.	7467.	10775.	14103.	17203.	21560.	21684.	20887.	15373.
C	68.0<<	4243.	4071.	5931.	8724.	11996.	15124.	17736.	21740.	22171.	21111.	15509.
A	67.5	4372.	4211.	6184.	9038.	12233.	15123.	17858.	21554.	21714.	20744.	15566.
L	65.0	5545.	5028.	7457.	10593.	13102.	15568.	17930.	19871.	19898.	19266.	16067.
	62.5	7091.	5894.	8495.	11323.	13343.	15498.	17503.	18347.	18467.	17771.	14926.
A	60.0	8465.	6940.	9159.	11283.	13205.	15199.	16626.	17219.	17104.	16335.	12845.
N	57.5	8856.	7724.	8955.	10874.	13044.	14693.	15640.	15302.	15428.	14894.	11244.
G	55.0	8721.	7944.	8482.	10463.	12740.	13978.	14516.	14001.	13822.	14045.	10716.
L	52.5	8474.	7725.	8529.	10209.	12219.	13173.	13545.	13492.	13324.	13106.	10257.
E	50.0	8230.	7396.	8568.	10115.	11471.	12406.	12928.	13126.	13088.	12138.	9515.
	47.5	7844.	7077.	8334.	10086.	10950.	11859.	12430.	12425.	12331.	11612.	8910.
	45.0	7502.	6750.	7744.	9558.	10667.	11433.	11780.	11413.	11306.	10377.	8022.
	42.5	7125.	6353.	7277.	9055.	10242.	10779.	10911.	10337.	10103.	9113.	7171.
	40.0	6506.	6044.	6837.	8543.	9619.	9954.	9865.	9208.	9056.	8220.	6514.
	37.5	5979.	5755.	6485.	8130.	8981.	9208.	8979.	8384.	8229.	7529.	6048.
	35.0	5734.	5546.	6231.	7819.	8295.	8465.	8132.	7674.	7571.	6950.	5628.
	30.0	5865.	5370.	5791.	6224.	6941.	6951.	6926.	6734.	6621.	5999.	4858.
	25.0	5534.	5298.	5379.	5448.	5837.	5984.	6009.	5796.	5671.	5221.	4289.
	20.0	5182.	5117.	5089.	5170.	5155.	5336.	5645.	5014.	4915.	4475.	3789.
	15.0	4848.	4847.	4786.	4730.	4741.	4585.	4415.	4135.	4057.	3759.	3335.
	10.0	4333.	4288.	4187.	4039.	3923.	3729.	3553.	3333.	3263.	3040.	2728.
	5.0	3428.	3398.	3355.	3266.	3182.	3032.	2899.	2750.	2725.	2598.	2441.
	0.0	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.
										PLANE OF MAXIMUM CANDELA		
										CONE OF MAXIMUM CANDELA		

REPORT NUMBER: RAB01839
 ISSUE DATE: 04/11/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 8 OF 9
 DATE SAMPLE TESTED: 04/11/16

CANDELA TABULATION

HOUSE SIDE

LATERAL ANGLE

	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.
90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
87.5	129.	40.	37.	37.	34.	32.	32.	32.	31.	30.	30.
85.0	309.	65.	44.	38.	31.	29.	29.	30.	30.	29.	29.
82.5	1109.	135.	66.	43.	28.	26.	27.	28.	28.	28.	28.
V 80.0	2822.	268.	112.	50.	27.	24.	24.	27.	27.	27.	27.
E 77.5	4608.	575.	173.	72.	28.	23.	22.	25.	26.	27.	27.
R 75.0	6410.	948.	265.	115.	43.	23.	21.	24.	26.	26.	26.
T 72.5	7958.	1252.	369.	144.	72.	28.	21.	24.	25.	26.	26.
I 70.0	8054.	1611.	423.	181.	105.	34.	22.	24.	26.	26.	27.
C 68.0<<	8829.	2177.	462.	227.	123.	40.	25.	25.	27.	27.	28.
A 67.5	9129.	2416.	475.	255.	125.	42.	26.	26.	27.	28.	28.
L 65.0	9832.	3551.	579.	381.	132.	52.	30.	29.	30.	30.	30.
62.5	9253.	3747.	780.	657.	170.	69.	35.	33.	33.	33.	33.
A 60.0	8065.	3645.	951.	846.	235.	80.	40.	43.	37.	36.	37.
N 57.5	7787.	3897.	1165.	888.	274.	78.	57.	50.	41.	42.	43.
G 55.0	7490.	4180.	1364.	770.	329.	79.	58.	70.	45.	49.	48.
L 52.5	7580.	4788.	1547.	777.	438.	119.	63.	61.	48.	52.	51.
E 50.0	7397.	5372.	1952.	780.	465.	178.	79.	58.	50.	49.	49.
47.5	7254.	5658.	2379.	932.	464.	205.	105.	70.	54.	49.	49.
45.0	6723.	5293.	2437.	1057.	499.	212.	129.	101.	65.	54.	53.
42.5	6165.	4803.	2211.	1052.	562.	239.	146.	126.	91.	74.	65.
40.0	5591.	4387.	2144.	1113.	825.	419.	154.	134.	111.	95.	77.
37.5	5084.	4001.	2177.	1184.	830.	539.	193.	145.	121.	106.	80.
35.0	4704.	3761.	2245.	1149.	850.	855.	305.	188.	129.	107.	84.
30.0	4142.	3428.	2208.	1351.	883.	1135.	970.	655.	289.	132.	126.
25.0	3742.	3169.	2187.	1492.	1248.	1013.	726.	594.	555.	448.	398.
20.0	3386.	2997.	2265.	1724.	1285.	814.	547.	531.	556.	370.	308.
15.0	3070.	2806.	2269.	1796.	1316.	894.	688.	668.	710.	717.	725.
10.0	2563.	2379.	2018.	1688.	1402.	1252.	1173.	1247.	1317.	1349.	1385.
5.0	2361.	2291.	2162.	2055.	1949.	1924.	1876.	1890.	1882.	1917.	1921.
0.0	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.	2634.

CONE OF MAXIMUM CANDELA

REPORT NUMBER: RAB01839
 ISSUE DATE: 04/11/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 9 OF 9
 DATE SAMPLE TESTED: 04/11/16

5-DEGREE ZONAL LUMEN SUMMARY

0- 5	61
5- 10	180
10- 15	323
15- 20	494
20- 25	679
25- 30	904
30- 35	1153
35- 40	1469
40- 45	1874
45- 50	2316
50- 55	2668
55- 60	3069
60- 65	3465
65- 70	3526
70- 75	3048
75- 80	2017
80- 85	720
85- 90	70
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	241
0- 20	1058
0- 30	2642
0- 40	5264
0- 50	9454
0- 60	15190
0- 70	22181
0- 80	27246
0- 90	28037
0-100	28037
0-110	28037
0-120	28037
0-130	28037
0-140	28037
0-150	28037
0-160	28037
0-170	28037
0-180	28037

REPORT NUMBER: RAB01840
DATE: 4/11/2016
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: ALED3T260/D10 - ALED3T260SF/D10 - WPLED3T260/D10 - WPLED3T260FX/D10 (TYPE III)
ADDRESS: 170 LUDLOW AVE, NORTHVALE, NJ 07647

LUMINAIRE: CAST FINNED METAL HOUSING, 4 CHIP ON BOARD LIGHT EMITTING DIODES, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, CLEAR GLASS LENS IN CAST BRONZE PAINTED METAL FRAME.

LAMP: FOUR WHITE LIGHT EMITTING DIODES (LEDs)

DRIVER: RD-240-S2200-D

OBJECT OF TEST: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT THE RATED INPUT VOLTAGES (120.0 AND 277.0 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	2/26/17
	OCEAN OPTICS QE65PRO Spectroradiometer	4/4/17
	RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry	4/4/17

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 (277.0 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 X.CAO

Approved D.WANG-MUNSON
Lighting Engineer

REPORT NUMBER: RAB01840
 DATE: 4/11/2016
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: ALED3T260/D10 - ALED3T260SF/D10 - WPLED3T260/D10 - WPLED3T260FX/D10 (TYPE III)

Page 2 of 4

RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	28037 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3429
Chromaticity Ordinate y	0.3643
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2051
Chromaticity Ordinate v'	0.4904
Correlated Color Temp CCT (K)	5119
ANSI C78.377-2008 Duv	0.007
Total Radiant Flux (milliWatts)	81552 *
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	2.19
Input Power (Watts)	261.6
Input Power Factor (%)	99.8
Input Current THD (%)	3.8
Input Voltage THD (%)	0.2
EFFICACY (Lumens/Watt)	
	107.2
ELECTRICAL AT MAX NONIMAL INPUT	
Input Voltage (Volts AC)	277.0
Input Current (Amps AC)	0.956
Input Power (Watts)	256.0
Input Power Factor (%)	96.6
Input Current THD (%)	5.6
Input Voltage THD (%)	0.2
Off-State Power (Watts)	0.0

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	70
R1 Light greyish red	66
R2 Dark greyish yellow	74
R3 Strong yellowish green	80
R4 Moderate yellowish green	71
R5 Light bluish green	68
R6 Light blue	65
R7 Light violet	80
R8 Light reddish purple	54
R9 Strong red	-42
R10 Strong yellow	38
R11 Strong green	68
R12 Strong blue	41
R13 Light yellowish pink (skin)	67
R14 Moderate olive green (leaf)	89

*NOTE:

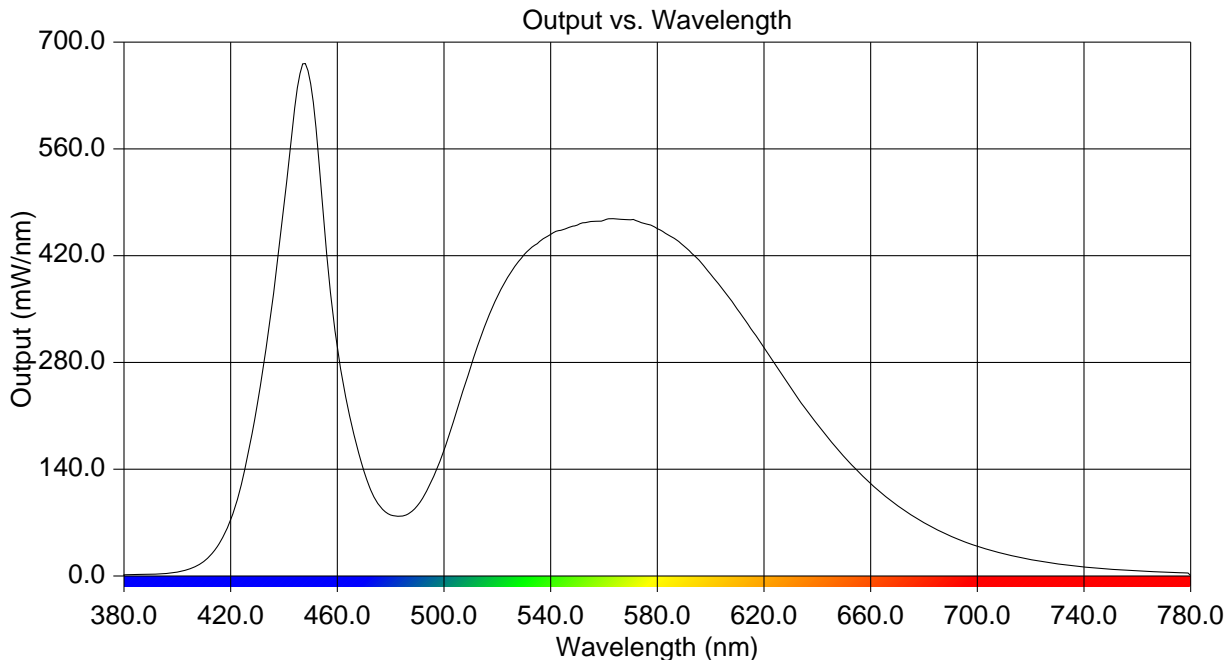
Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even 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.

REPORT NUMBER: RAB01840
 DATE: 4/11/2016
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: ALED3T260/D10 - ALED3T260SF/D10 - WPLED3T260/D10 - WPLED3T260FX/D10
 (TYPE III)

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	1.510	515	325.289	650	156.937
385	1.917	520	366.507	655	138.350
390	2.270	525	398.307	660	121.373
395	3.139	530	421.632	665	105.866
400	5.213	535	436.190	670	92.582
405	9.704	540	448.529	675	80.674
410	19.505	545	455.019	680	70.005
415	38.644	550	460.570	685	60.591
420	73.746	555	465.160	690	52.384
425	135.742	560	466.916	695	45.139
430	225.545	565	468.580	700	38.876
435	341.212	570	467.519	705	33.720
440	484.614	575	462.647	710	29.064
445	640.626	580	455.854	715	25.034
450	646.132	585	445.679	720	21.575
455	466.171	590	433.050	725	18.554
460	298.052	595	416.844	730	16.019
465	205.572	600	396.043	735	13.770
470	137.311	605	374.083	740	11.845
475	96.139	610	350.079	745	10.243
480	80.040	615	324.973	750	8.978
485	79.132	620	299.726	755	7.668
490	92.186	625	273.738	760	6.707
495	121.467	630	247.390	765	5.799
500	165.929	635	222.209	770	5.028
505	219.208	640	199.134	775	4.363
510	274.133	645	177.188	780	0.663



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CIE Chromaticity Diagram

