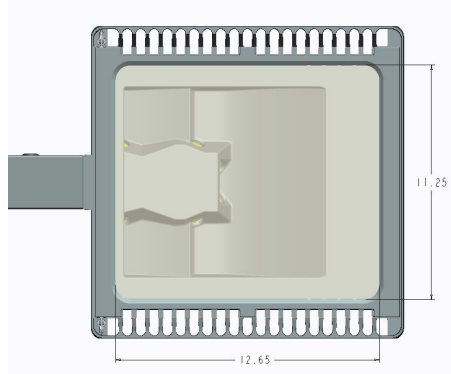


## ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 25 foot mounting height.



REPORT NUMBER: RAB04343

ISSUE DATE: 05/02/18

PAGE: 1 OF 9

DATE SAMPLE TESTED: 05/02/18

CATALOG NUMBER: ALED3T125/480 -

RWLED3T125/480 - RWLED3T125SF/480 -

WPLED3T125/480 (TYPE III) (ALSO

APPLIES TO 347 RCL)

LUMINAIRE: CAST FINNED METAL HOUSING, 6

CIRCUIT BOARDS EACH WITH 1 LED,

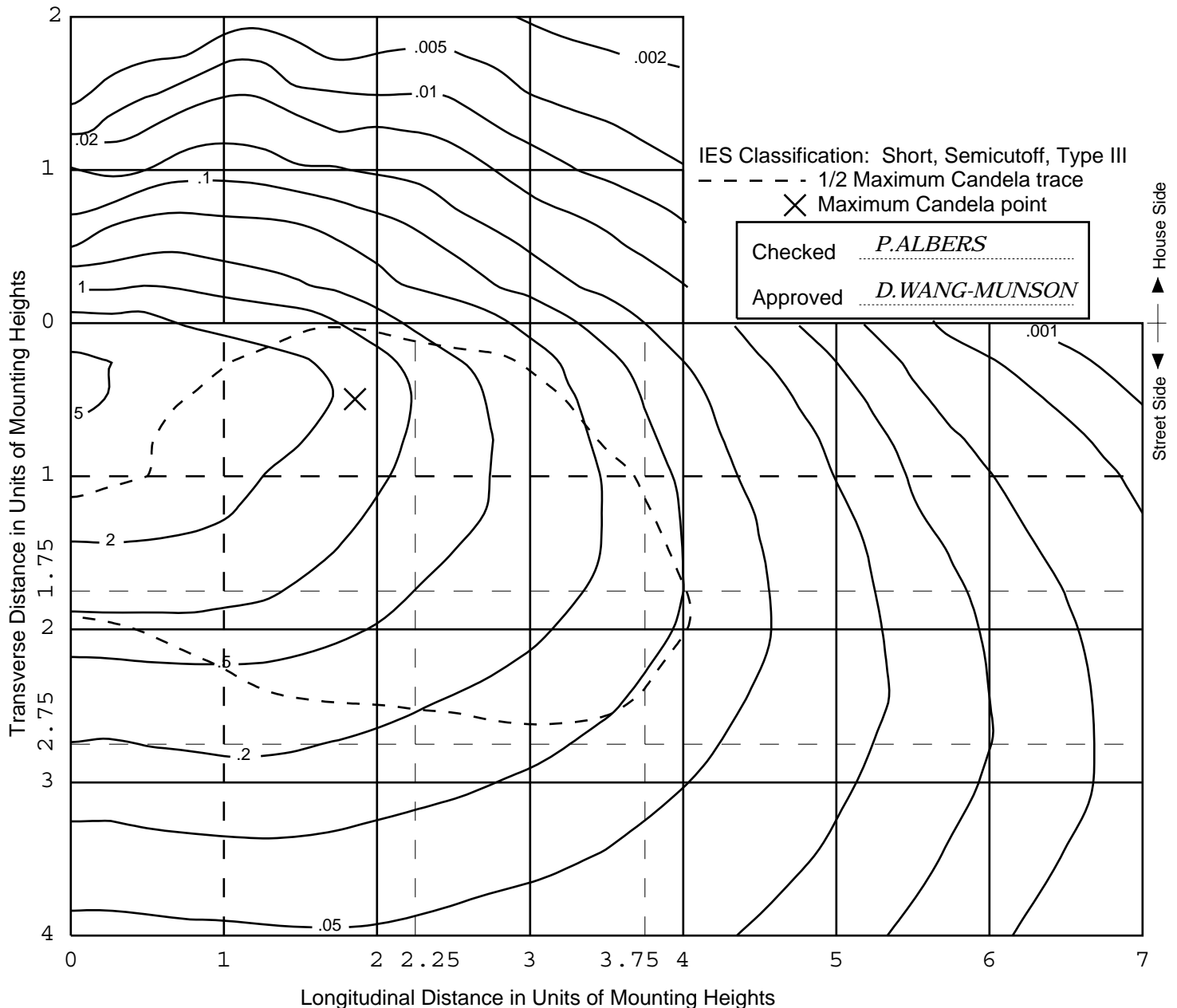
MOLDED PLASTIC REFLECTOR WITH

SPECULAR FINISH AND 1 APERTURE PER

LED, CLEAR FLAT GLASS LENS IN CAST

BROWN PAINTED METAL LENS FRAME.

\*(SEE PAGE 2 FOR MORE INFORMATION)\*



REPORT NUMBER: RAB04343

PAGE: 2 OF 9

ISSUE DATE: 05/02/18

DATE SAMPLE TESTED: 05/02/18

CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T12

ADDITIONAL INFORMATION

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

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.

TOTAL INPUT WATTS = 135.72 W AT 480.0 VAC.

LED DRIVER: 2 x RD-H065-A1810-480

TEST PROCEDURE: IESNA LM-79-08

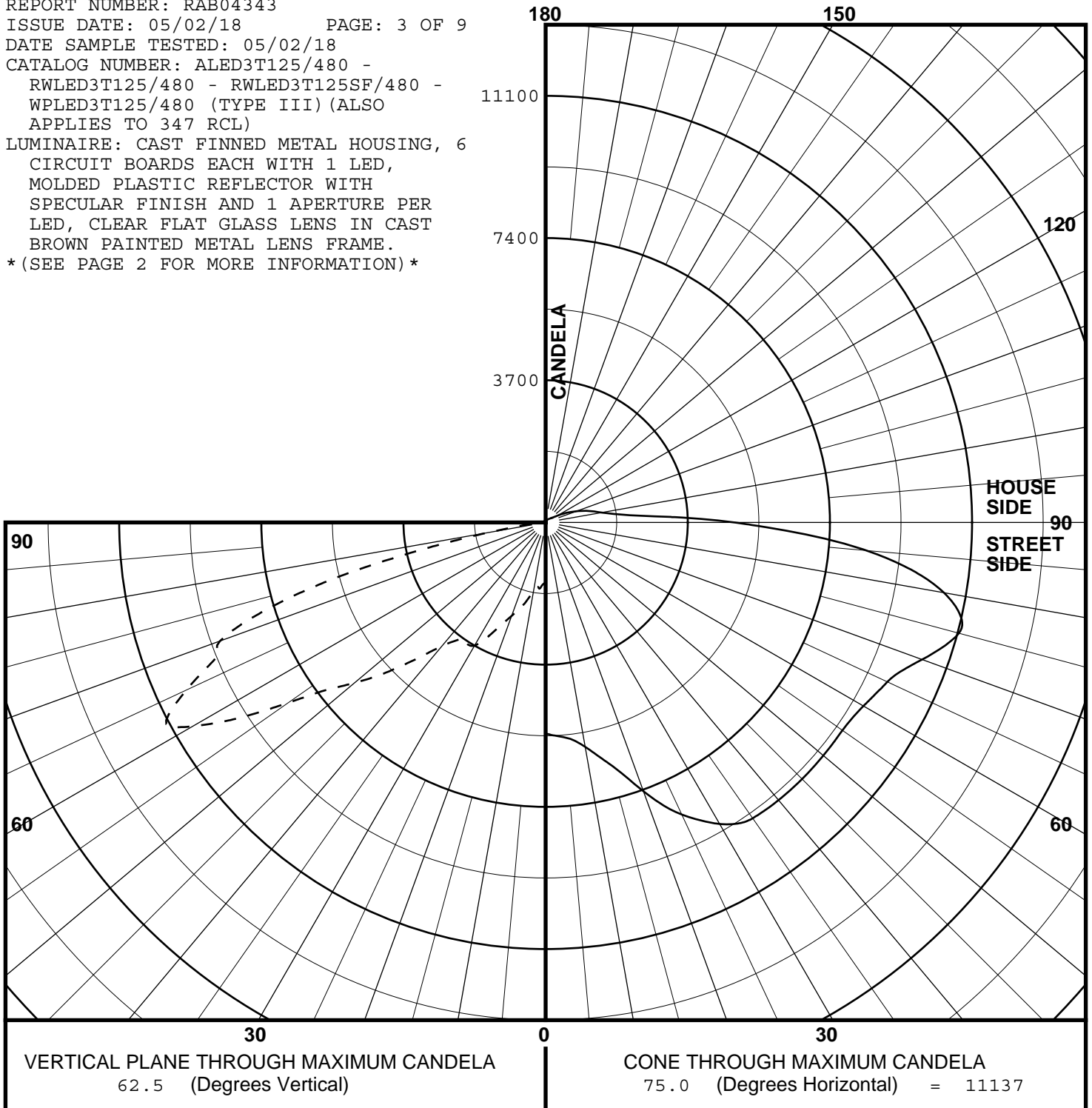
LM-80 DATA AVAILABLE FROM MANUFACTURER FOR SOLID STATE SOURCE

AMBIENT: 24.6

ACCREDITED LABORATORY CODE 201058-0

## MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

REPORT NUMBER: RAB04343  
 ISSUE DATE: 05/02/18 PAGE: 3 OF 9  
 DATE SAMPLE TESTED: 05/02/18  
 CATALOG NUMBER: ALED3T125/480 -  
 RWLED3T125/480 - RWLED3T125SF/480 -  
 WPLED3T125/480 (TYPE III) (ALSO  
 APPLIES TO 347 RCL)  
 LUMINAIRE: CAST FINNED METAL HOUSING, 6  
 CIRCUIT BOARDS EACH WITH 1 LED,  
 MOLDED PLASTIC REFLECTOR WITH  
 SPECULAR FINISH AND 1 APERTURE PER  
 LED, CLEAR FLAT GLASS LENS IN CAST  
 BROWN PAINTED METAL LENS FRAME.  
 \*(SEE PAGE 2 FOR MORE INFORMATION) \*



REPORT NUMBER: RAB04343

PAGE: 4 OF 9

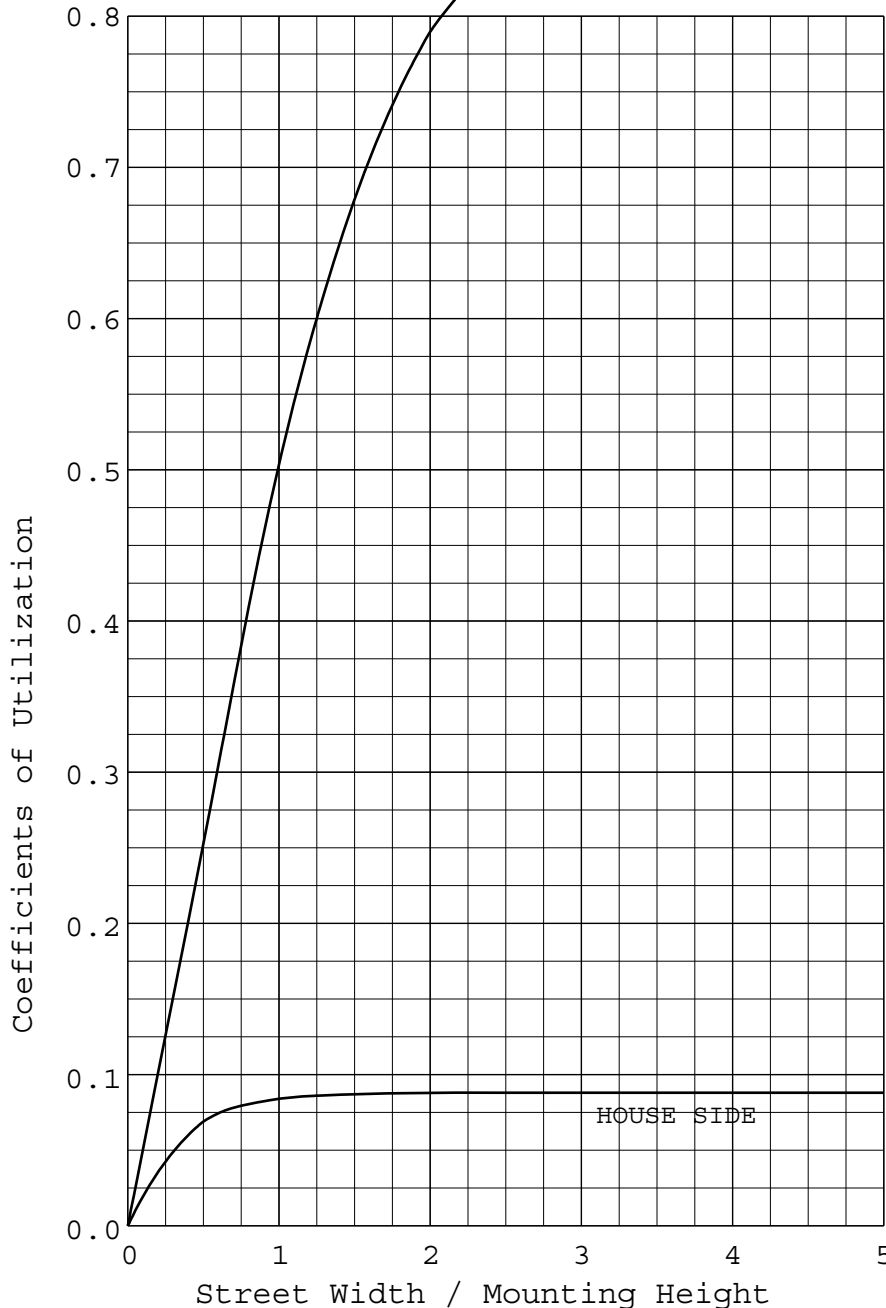
ISSUE DATE: 05/02/18

STREET SIDE

DATE SAMPLE TESTED: 05/02/18

CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T12

# COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	14857.	91.1
DOWNWARD HOUSE SIDE	1452.	8.9
DOWNWARD TOTAL	16309.	100.0
UPWARD STREET SIDE	0.	0.0
UPWARD HOUSE SIDE	0.	0.0
UPWARD TOTAL	0.	0.0
TOTAL FLUX	16309.	100.0
TOTAL INPUT WATTS = 135.7		
EFFICACY = 120.2 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: RAB04343

ISSUE DATE: 05/02/18

PAGE: 5 OF 9  
DATE SAMPLE TESTED: 05/02/18

CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 -

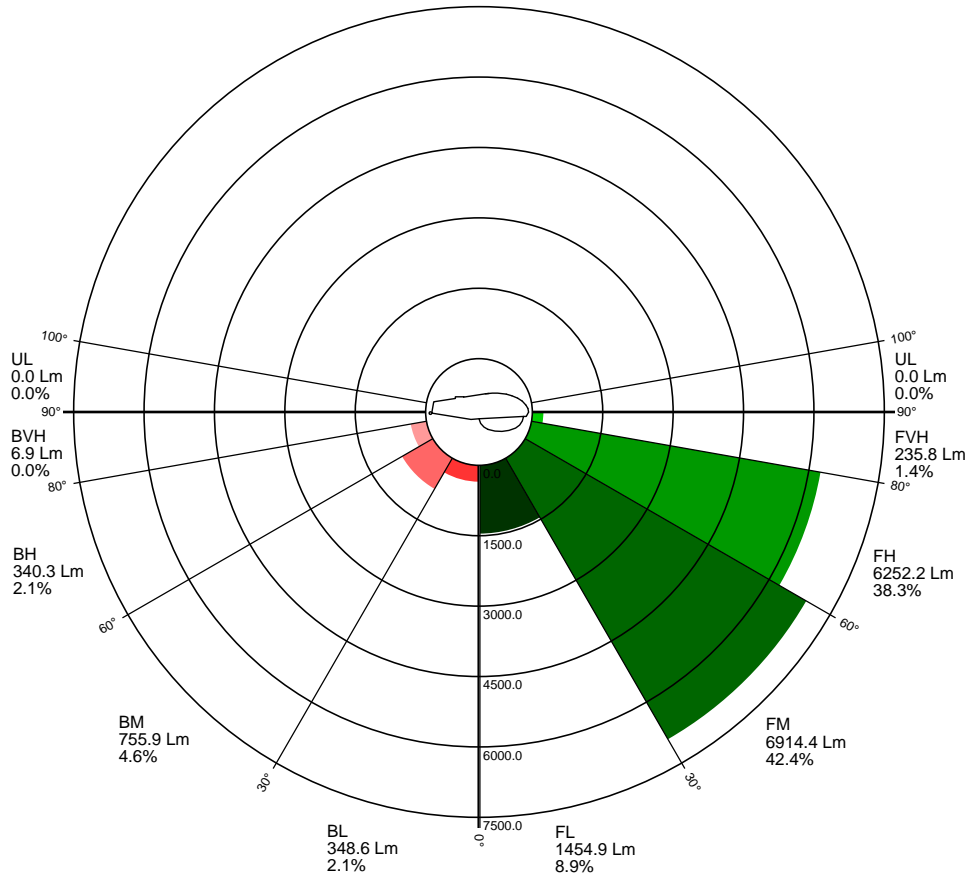
WPLLED3T125/480 (TYPE III) (ALSO APPLIES TO B1 U0 G3)

Zonal Summary		Lumens	% of Fixture	Zone Ratings		
				B	U	G
Forward		14857	91.1			
FL	(0° - 30°)	1454.9	8.9			
FM	(30° - 60°)	6914.4	42.4			
FH	(60° - 80°)	6252.2	38.3			G3
FVH	(80° - 90°)	235.8	1.4			G3
Backward		1452	8.9			
BL	(0° - 30°)	348.6	2.1	B1		
BM	(30° - 60°)	755.9	4.6	B1		
BH	(60° - 80°)	340.3	2.1	B1		G1
BVH	(80° - 90°)	6.9	0.0			G0
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		16309	100.0			

### Zonal Lumen Summary

(Linear scale)

UH  
0.0 Lm  
0.0%



REPORT NUMBER: RAB04343

ISSUE DATE: 05/02/18

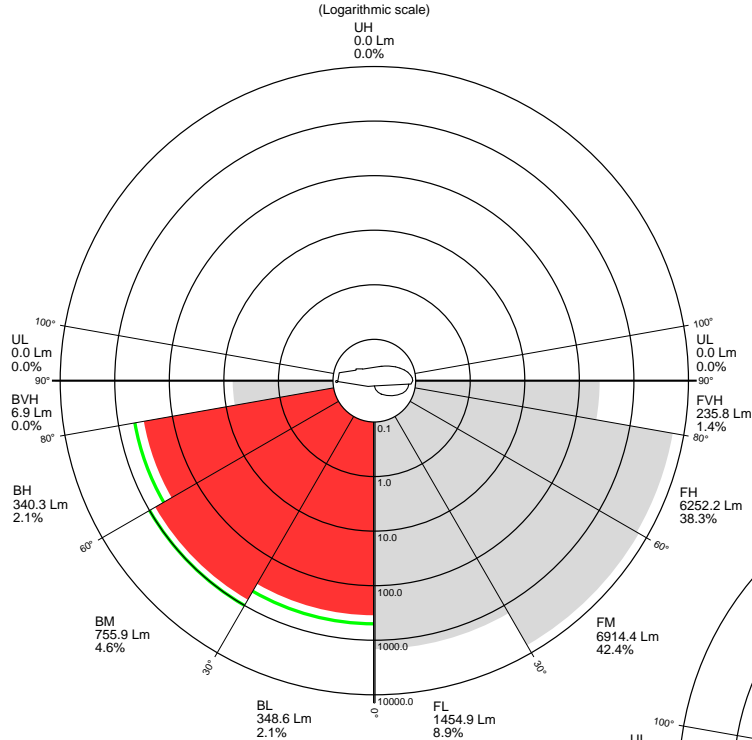
PAGE: 6 OF 9

DATE SAMPLE TESTED: 05/02/18

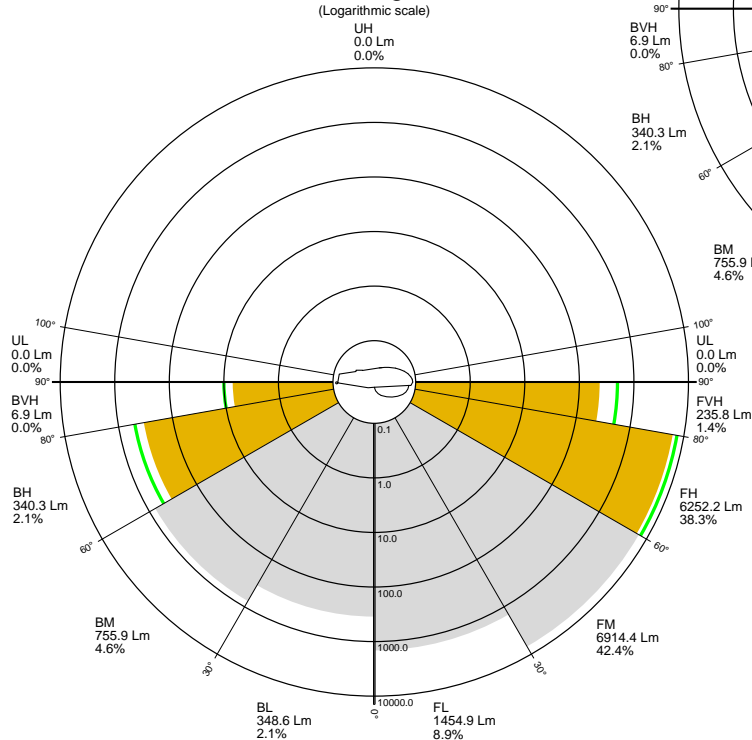
CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 -

WPLED3T125/480 (TYPE III) (ALSO APPLIES TO 347 RCL)

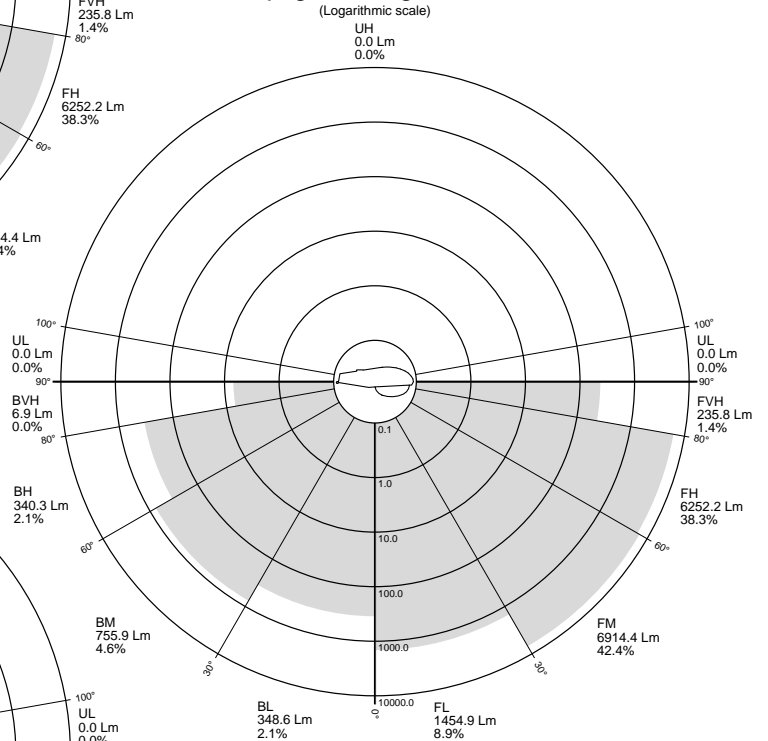
## Backlight Rating Details



## Glare Rating Details



## Uplight Rating Details



CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T125

[illegible]

CONE OF MAXIMUM CANDELA

REPORT NUMBER: RAB04343

PAGE: 8 OF 9

ISSUE DATE: 05/02/18

DATE SAMPLE TESTED: 05/02/18

CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T12

### 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
V E R T I C A L  A N G L E	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	13.	13.	13.	13.	12.	11.	9.	7.	7.	7.	7.
	85.0	19.	17.	15.	13.	12.	11.	9.	7.	7.	7.	7.
	82.5	43.	32.	18.	15.	12.	10.	9.	7.	7.	7.	7.
	80.0	203.	118.	60.	40.	13.	10.	8.	7.	7.	7.	7.
	77.5	862.	479.	158.	81.	15.	10.	8.	7.	7.	8.	8.
	75.0	1853.	785.	279.	103.	35.	13.	9.	7.	9.	9.	10.
	72.5	2837.	1202.	379.	164.	103.	30.	10.	8.	10.	11.	12.
	70.0	3695.	1661.	635.	295.	123.	37.	19.	9.	10.	11.	11.
	67.5	3776.	1802.	965.	410.	135.	54.	40.	11.	12.	12.	12.
	65.0	4080.	1730.	1092.	478.	171.	81.	70.	20.	14.	15.	14.
	62.5<<	4911.	2158.	1160.	579.	215.	142.	104.	32.	18.	15.	14.
	60.0	5178.	2419.	1381.	631.	267.	206.	111.	45.	26.	18.	17.
	57.5	4989.	2499.	1405.	801.	319.	236.	121.	53.	29.	17.	16.
	55.0	4471.	2431.	1327.	827.	353.	249.	135.	65.	32.	15.	14.
	52.5	3801.	2373.	1266.	774.	401.	271.	153.	77.	40.	16.	14.
	50.0	3433.	2410.	1187.	773.	462.	300.	168.	84.	49.	34.	24.
	47.5	3090.	2355.	1214.	825.	548.	321.	186.	96.	57.	74.	73.
	45.0	2800.	2200.	1257.	825.	565.	344.	221.	107.	80.	69.	94.
	42.5	2569.	2049.	1262.	800.	612.	376.	245.	133.	85.	57.	50.
	40.0	2392.	1936.	1268.	785.	656.	409.	253.	172.	113.	85.	60.
	37.5	2315.	1936.	1301.	790.	656.	432.	275.	167.	130.	108.	100.
	35.0	2310.	1977.	1369.	817.	653.	443.	318.	196.	134.	109.	99.
30.0	2220.	1951.	1429.	936.	642.	548.	376.	257.	186.	149.	131.	
25.0	2013.	1775.	1396.	1097.	687.	504.	386.	286.	215.	188.	188.	
20.0	1776.	1615.	1299.	1074.	836.	574.	428.	331.	271.	235.	233.	
15.0	1668.	1577.	1306.	1127.	940.	798.	657.	565.	525.	496.	490.	
10.0	1510.	1444.	1292.	1138.	1054.	973.	926.	868.	811.	744.	734.	
5.0	1567.	1528.	1433.	1358.	1287.	1215.	1144.	1081.	1053.	1025.	1032.	
0.0	1555.	1555.	1555.	1555.	1555.	1555.	1555.	1555.	1555.	1555.	1555.	

CONE OF MAXIMUM CANDELA



REPORT NUMBER: RAB04343

ISSUE DATE: 05/02/18

PREPARED FOR: RAB LIGHTING INC. RC LIGHTING

PAGE: 9 OF 9

DATE SAMPLE TESTED: 05/02/18

### 5-DEGREE ZONAL LUMEN SUMMARY

0- 5	38
5- 10	124
10- 15	228
15- 20	342
20- 25	464
25- 30	608
30- 35	756
35- 40	891
40- 45	1067
45- 50	1302
50- 55	1620
55- 60	2035
60- 65	2202
65- 70	1967
70- 75	1546
75- 80	878
80- 85	226
85- 90	16
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	163
0- 20	732
0- 30	1803
0- 40	3451
0- 50	5819
0- 60	9474
0- 70	13643
0- 80	16066
0- 90	16309
0-100	16309
0-110	16309
0-120	16309
0-130	16309
0-140	16309
0-150	16309
0-160	16309
0-170	16309
0-180	16309

REPORT NUMBER: RAB04344  
DATE: 5/1/2018  
PREPARED FOR: RAB LIGHTING INC. RC LIGHTING  
CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T125/480  
(TYPE III) (ALSO APPLIES TO 347 RCL)

Page 1 of 4

ADDRESS: 170 LUDLOW AVE, NORTHVALE, NJ 07647

LUMINAIRE: CAST FINNED METAL HOUSING, 6 CIRCUIT BOARDS EACH WITH 1 LED, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH AND 1 APERTURE PER LED, CLEAR FLAT GLASS LENS IN CAST BROWN PAINTED METAL LENS FRAME.

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

DRIVER: 2 X RD-H065-A1810-480

OBJECT OF TEST: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT THE RATED INPUT VOLTAGES (480.0 AND 347.0 VAC, 60Hz) TO THE TEST SAMPLE.

INSTRUMENTS:	GWINSTEK PROGRAMMABLE AC POWER SOURCE APS-7100	Calibration Due:
	CHROMA PROGRAMMABLE DIGITAL POWER METER MODEL 66202	N/A
	OCEAN OPTICS QE65PRO Spectroradiometer	3/08/19
	RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry	04/23/19

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 (347.0 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: RAB04344  
 DATE: 5/1/2018  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING  
 CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T125/480  
 (TYPE III) (ALSO APPLIES TO 347 RCL)

Page 2 of 4

### RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	16309 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3485
Chromaticity Ordinate y	0.3598
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2106
Chromaticity Ordinate v'	0.4891
Correlated Color Temp CCT (K)	4903
ANSI C78.377-2008 Duv	0.003
Total Radiant Flux (milliWatts)	48783 *
ELECTRICAL	
Input Voltage (Volts AC)	480.0
Input Current (Amps AC)	0.298
Input Power (Watts)	135.7
Input Power Factor (%)	94.9
Input Current THD (%)	13.7
Input Voltage THD (%)	0.2
EFFICACY (Lumens/Watt)	
	120.2
ELECTRICAL AT MAX NONIMAL INPUT	
Input Voltage (Volts AC)	347.0
Input Current (Amps AC)	0.388
Input Power (Watts)	133.4
Input Power Factor (%)	99.0
Input Current THD (%)	5.8
Input Voltage THD (%)	0.2
Off-State Power (Watts)	0.0

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	75
R1 Light greyish red	71
R2 Dark greyish yellow	79
R3 Strong yellowish green	88
R4 Moderate yellowish green	76
R5 Light bluish green	74
R6 Light blue	74
R7 Light violet	81
R8 Light reddish purple	55
R9 Strong red	-32
R10 Strong yellow	54
R11 Strong green	76
R12 Strong blue	59
R13 Light yellowish pink (skin)	72
R14 Moderate olive green (leaf)	93

### \*NOTE:

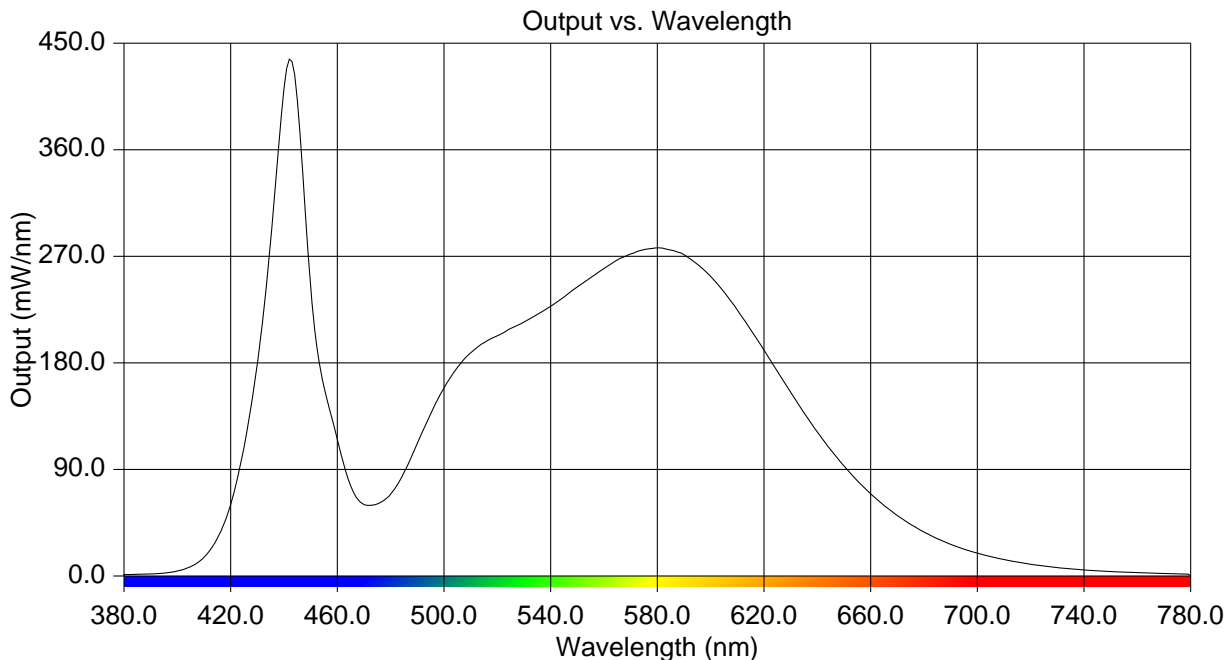
Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even 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: RAB04344  
 DATE: 5/1/2018  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING  
 CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T125/480  
 (TYPE III) (ALSO APPLIES TO 347 RCL)

Page 3 of 4

### RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	1.129	515	196.787	650	92.797
385	1.409	520	202.717	655	80.410
390	1.678	525	208.871	660	69.313
395	2.467	530	214.322	665	59.666
400	4.130	535	220.632	670	50.956
405	7.839	540	227.738	675	43.549
410	15.730	545	235.582	680	37.101
415	31.584	550	243.715	685	31.530
420	60.438	555	251.909	690	26.695
425	108.334	560	259.485	695	22.618
430	178.729	565	266.543	700	19.194
435	282.077	570	271.767	705	16.233
440	411.284	575	275.314	710	13.755
445	401.480	580	276.801	715	11.707
450	243.867	585	274.938	720	9.893
455	159.449	590	271.192	725	8.404
460	115.290	595	263.126	730	7.159
465	76.087	600	252.858	735	6.037
470	60.247	605	239.564	740	5.124
475	60.807	610	224.415	745	4.359
480	68.850	615	207.925	750	3.772
485	87.268	620	190.668	755	3.217
490	111.855	625	172.902	760	2.784
495	137.155	630	154.726	765	2.382
500	158.983	635	137.720	770	2.050
505	175.874	640	121.324	775	1.764
510	188.307	645	106.580	780	0.269



REPORT NUMBER: RAB04344  
 DATE: 5/1/2018  
 PREPARED FOR: RAB LIGHTING INC. RC LIGHTING  
 CATALOG NUMBER: ALED3T125/480 - RWLED3T125/480 - RWLED3T125SF/480 - WPLED3T125/480  
 (TYPE III) (ALSO APPLIES TO 347 RCL)

Page 4 of 4

## CIE Chromaticity Diagram

