

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P271450

Luminaire Tested: **ISC-AF-450-LED-E1-T4W-7027-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271450
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29757)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISC-AF-450-LED-E1-T4W-7027-ULG
Description: IMPACT ELITE LED CYLINDER LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE, WITH UPLIGHT GLOW
Light Source: (16) 2700K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4002.7 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B1 - U5 - G1

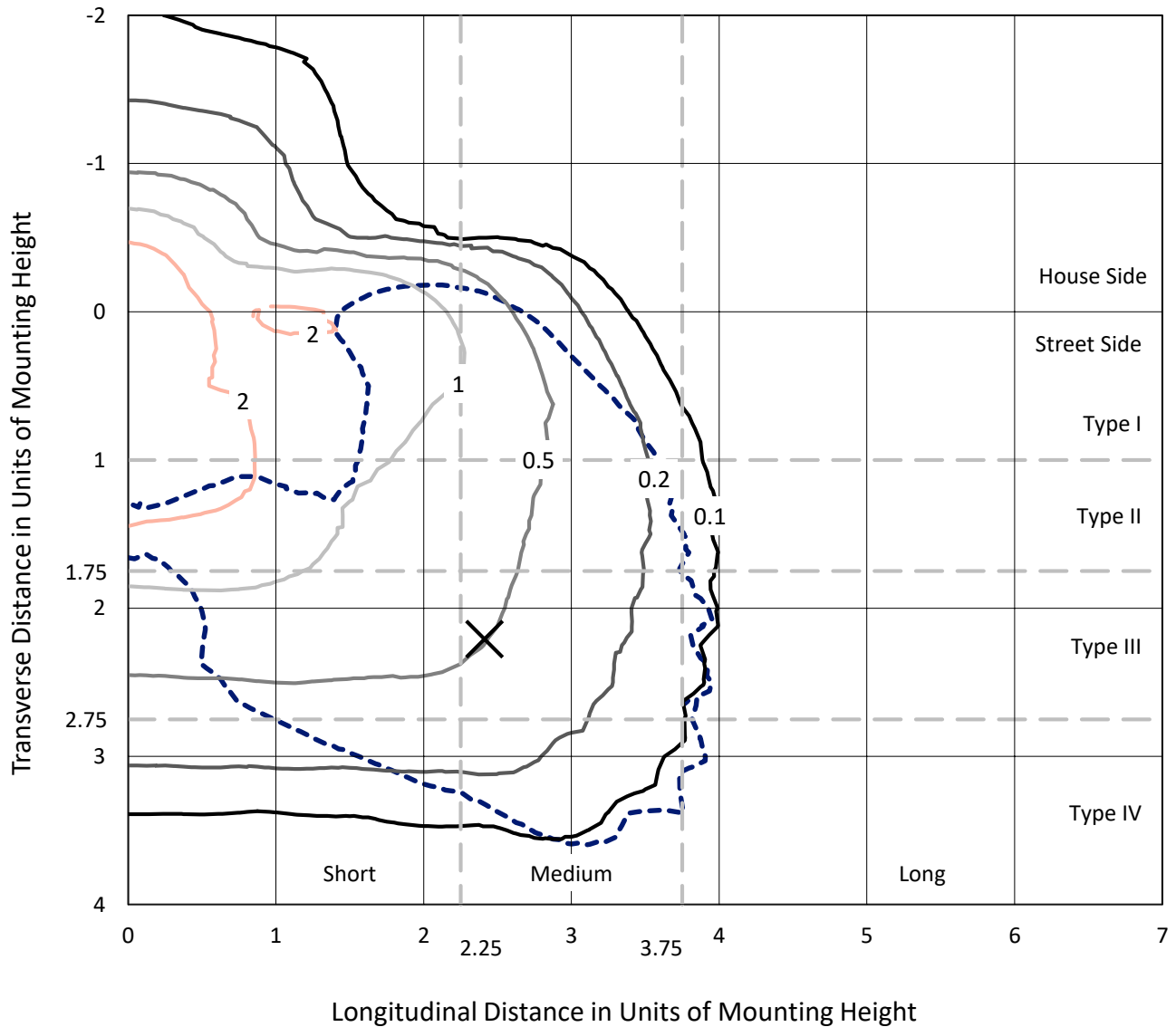
Input Watts (W): 42.01
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

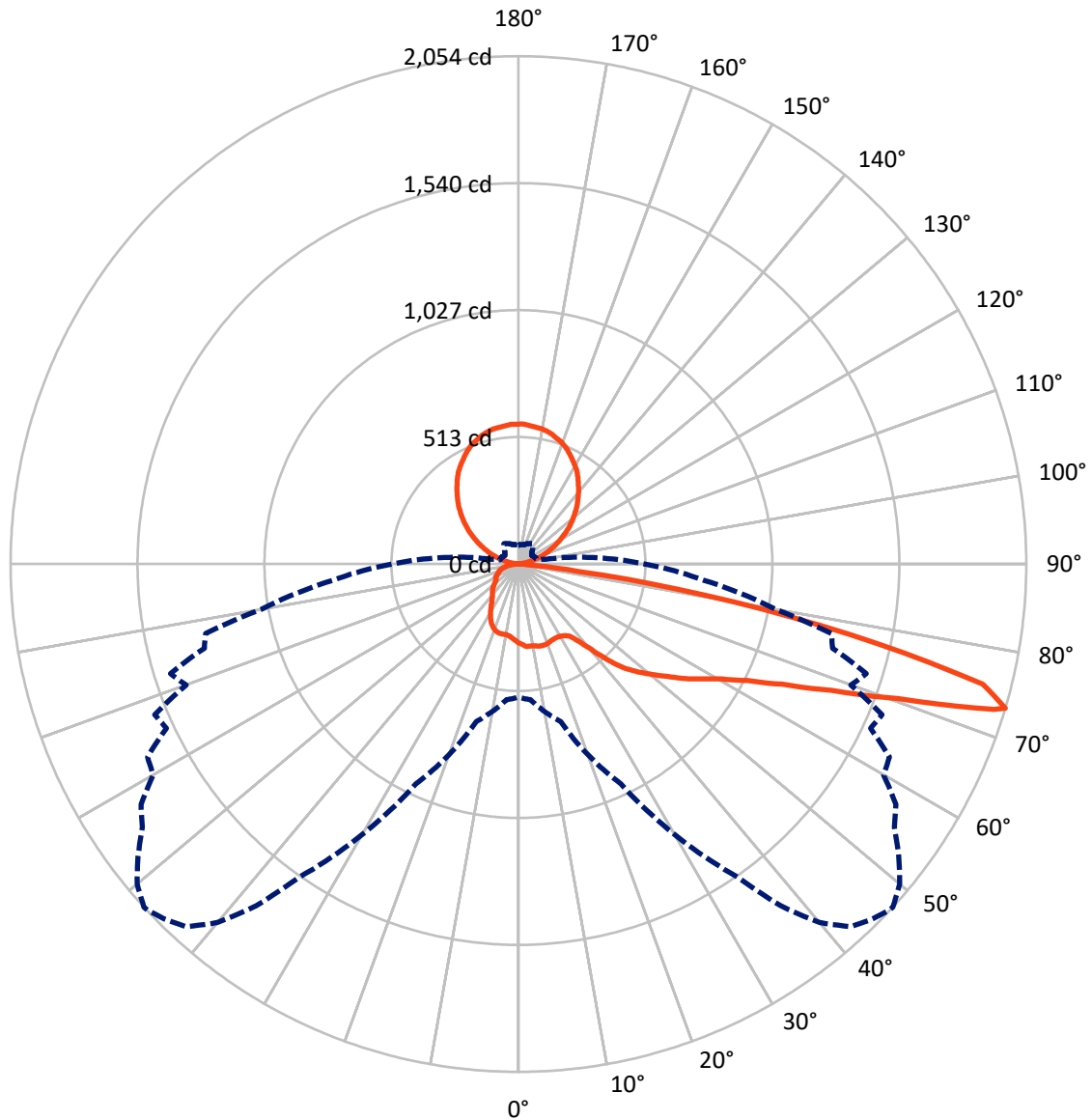
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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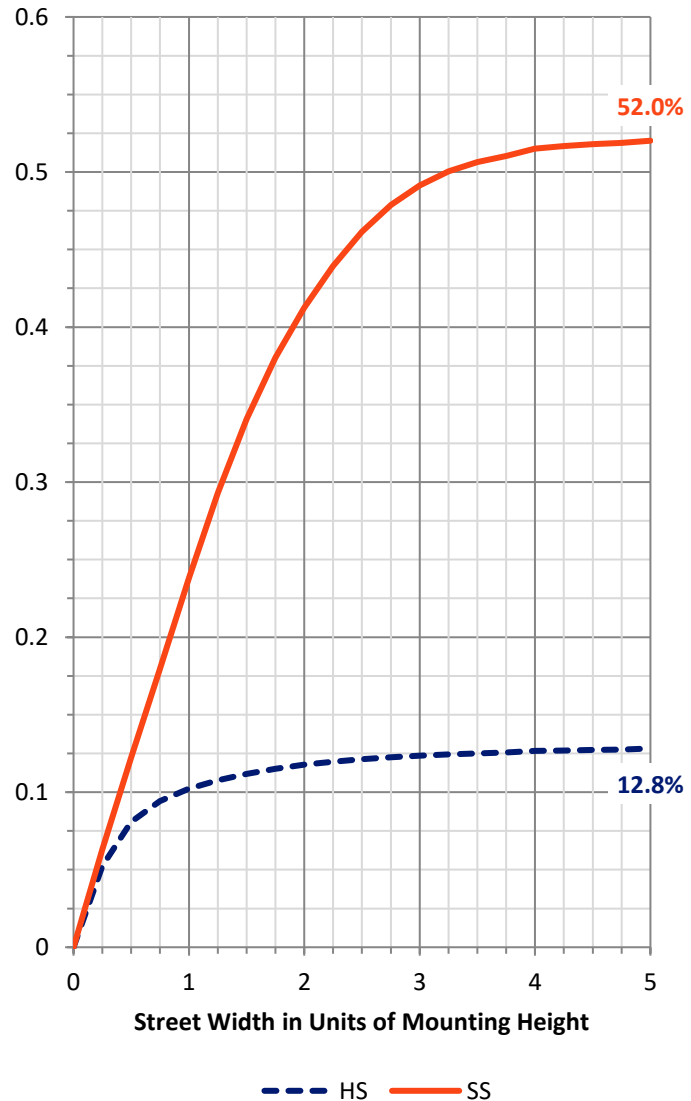
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	520.0	699.9	1219.9
	% Fixture	13.0	17.5	30.5
Street Side	Lumens	2082.9	699.9	2782.7
	% Fixture	52.0	17.5	69.5
Total	Lumens	2602.9	1399.8	4002.7
	% Fixture	65.0	35.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.4	0.8
10°-20°	90.6	2.3
20°-30°	139.2	3.5
30°-40°	203.1	5.1
40°-50°	334.9	8.4
50°-60°	524.3	13.1
60°-70°	711.2	17.8
70°-80°	526.7	13.2
80°-90°	42.6	1.1
90°-100°	4.7	0.1
100°-110°	67.7	1.7
110°-120°	150.2	3.8
120°-130°	219.7	5.5
130°-140°	260.7	6.5
140°-150°	264.3	6.6
150°-160°	226.8	5.7
160°-170°	152.2	3.8
170°-180°	53.3	1.3
0°-90°	2602.9	65.0
0°-180°	4002.7	100.0



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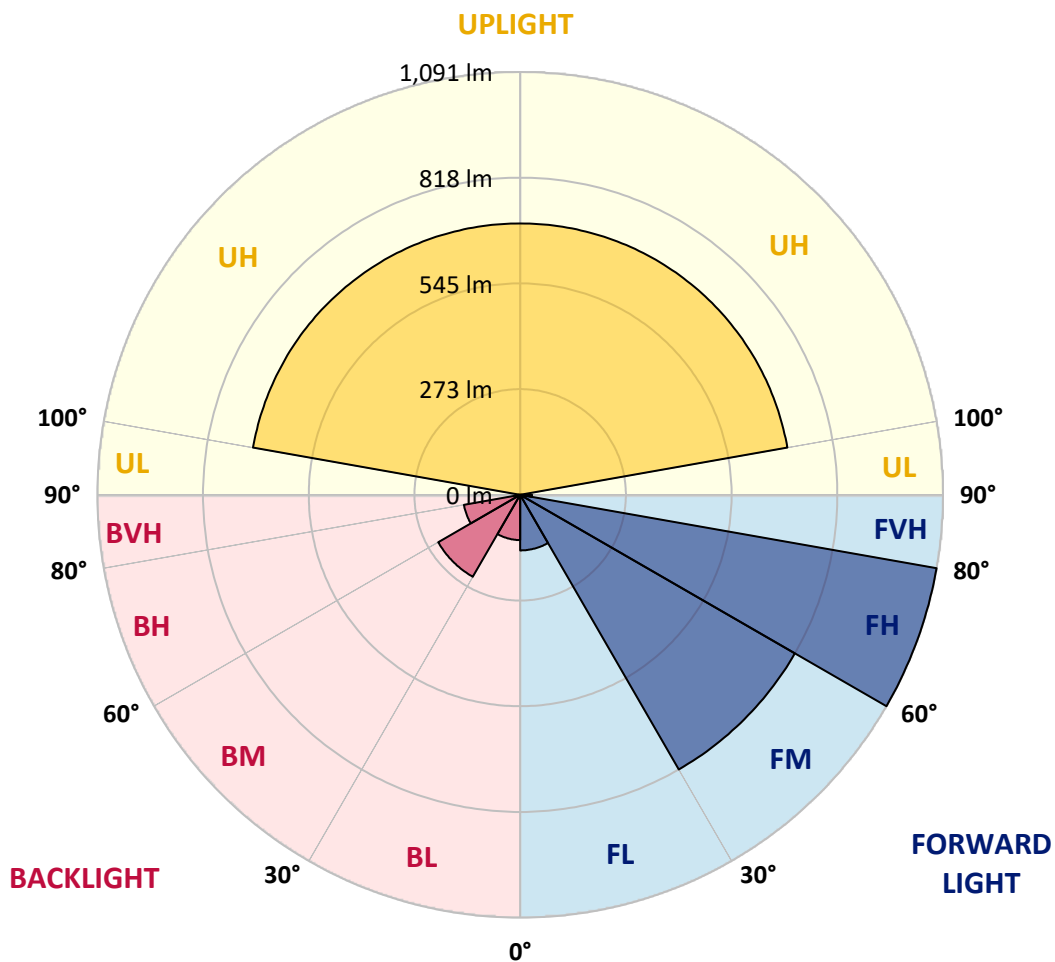
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	143.5	3.6			
FM (30°-60°)	818.1	20.4			
FH (60°-80°)	1090.6	27.2			G1/1800
FVH (80°-90°)	30.7	0.8			G1/100
BL (0°-30°)	116.7	2.9	B1/500		
BM (30°-60°)	244.2	6.1	B1/1000		
BH (60°-80°)	147.3	3.7	B1/500		G1/500
BVH (80°-90°)	11.9	0.3			G1/100
UL (90°-100°)	4.7	0.1		U1/10	
UH (100°-180°)	699.9	17.5		U4/1000	

BUG Rating: B1-U5-G1

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47°	47.5°
0°	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7
2.5°	338.5	337.8	335.1	334.2	331.7	329.9	329.0	328.2	330.8	329.0	326.5
5°	360.0	358.3	354.9	349.7	344.6	341.2	340.3	338.5	338.5	336.9	335.1
7.5°	375.5	374.6	369.5	361.7	353.1	347.1	343.7	341.2	342.0	340.3	335.1
10°	390.1	388.3	379.7	370.3	357.4	350.6	346.3	342.0	345.4	342.8	336.0
12.5°	401.3	399.6	387.5	375.5	360.8	353.1	348.8	346.3	349.7	348.0	340.3
15°	407.3	405.6	393.5	378.9	363.5	354.9	353.1	351.5	354.0	350.6	343.7
17.5°	403.9	403.9	392.6	377.2	364.4	355.7	353.1	351.5	354.9	351.5	343.7
20°	390.9	392.6	384.9	368.7	359.1	353.1	350.6	347.1	350.6	347.1	342.0
22.5°	374.6	376.3	372.1	357.4	350.6	346.3	345.4	342.0	344.6	342.0	336.9
25°	360.0	360.0	358.3	345.4	344.6	341.2	342.0	340.3	342.0	338.5	335.1
27.5°	360.8	360.8	354.0	341.2	340.3	340.3	340.3	340.3	341.2	338.5	335.1
30°	411.5	413.3	393.5	357.4	344.6	342.8	343.7	342.8	343.7	342.8	338.5
32.5°	488.0	488.0	469.2	413.3	367.8	356.5	352.2	351.5	348.8	348.0	344.6
35°	563.7	562.8	543.9	482.0	424.4	403.0	389.2	376.3	370.3	364.4	358.3
37.5°	627.3	624.6	622.1	551.6	491.6	466.6	450.2	431.4	419.3	409.0	395.3
40°	686.6	690.9	700.3	616.1	558.5	535.3	519.0	495.0	482.9	470.0	453.6
42.5°	768.1	774.2	775.1	685.7	619.5	604.0	591.2	573.1	560.3	544.7	530.2
45°	847.2	848.1	850.7	760.4	694.3	674.4	665.0	647.9	631.6	611.7	599.8
47.5°	901.3	898.8	909.9	846.3	782.0	759.6	745.9	720.0	695.1	670.1	652.2
50°	967.6	964.9	964.9	944.3	883.3	857.5	833.4	785.4	758.7	727.8	701.9
52.5°	1026.0	1016.5	1022.5	1034.5	989.8	957.1	915.1	860.9	825.7	787.9	755.3
55°	1105.8	1056.9	1070.6	1112.7	1095.6	1044.8	988.9	931.5	891.0	848.1	818.0
57.5°	1078.3	1044.8	1085.2	1159.2	1158.3	1111.0	1063.8	993.3	952.9	912.5	875.6
60°	979.5	996.7	1084.3	1191.0	1195.1	1158.3	1119.6	1054.3	1022.5	980.4	943.4
62.5°	903.1	927.9	1048.2	1188.3	1237.2	1202.9	1171.1	1132.4	1110.1	1074.9	1037.1
65°	898.8	913.4	1030.3	1185.8	1296.5	1278.6	1263.9	1245.9	1241.5	1215.9	1172.0
67.5°	940.0	953.7	1061.2	1251.9	1384.2	1376.6	1398.0	1394.5	1413.4	1400.5	1364.4
70°	859.2	867.0	999.3	1275.1	1584.4	1618.7	1667.0	1664.3	1704.7	1673.8	1631.7
72.5°	603.2	618.7	735.5	1053.4	1588.7	1772.5	1884.4	1978.9	2022.6	2030.3	2010.6
73°	538.7	550.8	659.1	981.3	1545.7	1741.6	1892.0	1989.2	2027.8	2051.9	2053.5
75°	187.3	193.3	287.9	594.6	1235.6	1520.0	1713.2	1800.9	1791.5	1862.0	1939.4
77.5°	60.2	61.1	74.8	153.8	596.4	943.4	1159.2	1239.9	1193.5	1269.9	1373.1
80°	36.9	38.6	49.0	69.6	156.3	286.1	484.6	606.6	581.7	653.0	763.0
82.5°	22.4	23.2	30.0	43.0	62.7	69.6	91.1	123.8	152.2	183.1	239.7
85°	10.3	11.2	14.6	19.8	25.8	26.6	25.8	24.1	27.5	31.8	36.9
87.5°	0.0	0.0	0.9	1.8	0.9	0.0	0.0	0.0	0.0	0.9	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	2.0	2.0	2.0	3.0	4.0	5.1	6.4	7.6	8.8	9.6	9.8
100°	7.8	7.8	9.8	13.7	21.6	23.5	25.5	27.5	29.5	29.8	29.9
102.5°	27.5	27.5	31.4	37.3	44.2	45.4	46.6	47.9	49.0	49.2	49.2
105°	53.0	53.0	55.0	59.8	64.8	65.8	66.7	67.7	68.7	68.9	68.9
107.5°	76.5	75.5	78.5	82.5	86.3	87.1	87.9	88.6	89.3	89.7	89.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47°	47.5°
110°	99.2	100.1	101.1	104.0	108.0	108.4	109.0	109.4	110.0	110.3	110.4
112.5°	121.7	121.7	123.7	126.6	129.5	130.1	130.5	131.1	131.5	131.9	132.1
115°	143.3	144.3	146.2	148.2	151.2	151.6	152.2	152.6	153.1	153.5	153.6
117.5°	165.8	166.8	168.8	170.8	173.7	174.2	174.7	175.2	175.7	175.9	175.9
120°	189.5	191.4	192.3	194.3	197.3	197.4	197.8	198.1	198.3	198.6	198.7
122.5°	215.0	216.0	216.9	218.8	221.8	222.0	222.3	222.6	222.8	223.0	223.0
125°	239.5	241.5	242.5	243.4	246.3	246.6	246.9	247.1	247.3	247.6	247.6
127.5°	262.0	264.0	265.0	267.0	269.0	269.4	269.9	270.4	270.9	271.3	271.4
130°	284.7	286.6	287.5	288.5	292.5	292.7	292.9	293.3	293.5	293.8	293.9
132.5°	307.2	308.2	311.2	312.1	315.0	315.2	315.6	315.8	316.0	316.7	316.8
135°	329.8	330.8	332.7	334.7	338.6	338.6	338.6	338.6	338.6	339.2	339.4
137.5°	352.3	353.3	356.3	357.3	360.2	360.2	360.2	360.2	360.2	360.6	360.7
140°	375.0	375.9	377.8	378.8	380.8	381.0	381.3	381.6	381.8	382.0	382.0
142.5°	396.5	398.5	400.5	399.5	402.4	402.4	402.4	402.4	402.4	402.8	402.9
145°	417.2	418.1	420.0	420.0	423.0	423.2	423.6	423.8	424.0	424.4	424.4
147.5°	435.8	435.8	438.7	439.7	443.7	443.9	444.1	444.4	444.6	444.8	444.8
150°	452.5	453.5	455.4	456.4	460.3	460.5	460.8	461.1	461.3	461.5	461.5
152.5°	470.2	471.1	474.0	473.0	476.0	476.2	476.6	476.8	477.0	477.2	477.2
155°	489.8	490.7	492.7	491.7	493.7	493.7	493.7	493.7	493.7	493.9	493.9
157.5°	503.5	505.5	507.5	506.5	509.4	509.4	509.4	509.4	509.4	509.4	509.4
160°	515.3	517.2	519.2	519.2	522.2	522.2	522.2	522.2	522.2	522.2	522.2
162.5°	525.1	526.0	529.0	528.0	531.0	531.0	531.0	531.0	531.0	531.2	531.2
165°	535.9	536.8	538.8	537.8	541.8	541.8	541.8	541.8	541.8	541.9	541.9
167.5°	544.7	545.7	548.7	547.7	550.6	550.4	550.1	549.9	549.7	549.7	549.7
170°	551.6	552.5	555.5	554.5	556.5	556.3	556.1	555.7	555.5	555.3	555.3
172.5°	554.5	555.5	558.5	556.5	558.5	558.3	557.9	557.7	557.5	557.7	557.7
175°	556.5	558.5	559.5	558.5	561.4	561.4	561.4	561.4	561.4	561.6	561.6
177.5°	561.4	562.4	564.3	563.3	567.3	567.1	566.8	566.5	566.3	566.3	566.3
180°	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3



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CANDELA DISTRIBUTION (continued):

	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7
2.5°	329.0	326.5	326.5	323.1	324.7	321.3	323.1	319.7	321.3	317.0	319.7
5°	334.2	329.9	329.9	324.7	325.6	319.7	322.2	315.3	318.8	311.0	316.2
7.5°	336.9	329.0	332.6	323.1	327.3	317.0	322.2	311.0	317.9	306.0	314.5
10°	340.3	329.0	335.1	324.7	329.9	317.9	324.7	311.0	319.7	305.1	312.8
12.5°	345.4	333.5	338.5	326.5	333.5	319.7	326.5	312.8	321.3	305.1	314.5
15°	348.8	336.9	342.0	329.9	335.1	319.7	328.2	311.9	321.3	304.2	314.5
17.5°	348.0	336.9	342.0	328.2	334.2	318.8	327.3	311.0	319.7	301.7	312.8
20°	344.6	335.1	338.5	326.5	331.7	316.2	323.9	307.6	317.0	299.0	310.2
22.5°	340.3	330.8	335.1	323.9	329.0	313.6	320.4	306.0	315.3	297.2	307.6
25°	337.8	329.9	332.6	321.3	328.2	314.5	321.3	305.1	315.3	297.2	309.4
27.5°	336.9	329.9	335.1	324.7	330.8	318.8	325.6	311.0	319.7	300.8	312.8
30°	342.0	336.0	340.3	331.7	336.9	324.7	331.7	317.9	326.5	308.5	322.2
32.5°	348.0	342.0	346.3	338.5	346.3	334.2	342.8	329.0	339.4	321.3	334.2
35°	360.8	354.0	360.0	351.5	360.0	350.6	360.0	345.4	358.3	340.3	354.0
37.5°	394.4	375.5	381.5	372.1	380.6	368.7	384.9	370.3	384.9	367.8	386.7
40°	447.6	414.2	420.1	400.5	413.3	395.3	414.9	403.9	423.6	402.1	426.2
42.5°	517.2	485.4	479.4	449.4	460.5	439.1	458.9	439.1	465.7	445.1	475.1
45°	580.8	547.3	537.8	508.7	516.3	488.0	512.9	485.4	520.7	496.7	534.4
47.5°	633.2	593.7	586.1	552.5	566.2	539.6	570.5	541.3	584.3	560.3	604.0
50°	681.4	632.4	630.7	594.6	617.8	591.2	635.0	615.2	657.3	633.2	684.8
52.5°	736.4	674.4	683.1	650.5	687.5	665.0	715.7	687.5	742.4	716.6	773.4
55°	794.8	729.5	751.8	732.1	775.9	761.2	804.3	778.5	832.5	806.8	867.0
57.5°	859.2	803.4	842.9	833.4	872.2	854.1	902.2	879.0	933.1	911.6	971.8
60°	943.4	906.5	945.2	944.3	977.9	977.0	1007.9	994.2	1045.6	1036.3	1091.2
62.5°	1052.5	1023.3	1064.6	1053.4	1093.8	1086.9	1124.8	1124.8	1161.7	1174.5	1229.6
65°	1199.5	1160.8	1209.7	1192.6	1233.0	1234.7	1258.7	1263.1	1307.8	1322.3	1369.6
67.5°	1398.8	1354.1	1392.8	1360.1	1406.6	1404.1	1424.6	1433.2	1439.3	1474.5	1479.6
70°	1685.8	1618.7	1654.0	1609.3	1617.9	1624.0	1585.3	1613.6	1544.9	1600.8	1525.1
72.5°	1996.0	1919.5	1858.5	1813.9	1725.4	1712.5	1599.9	1624.0	1477.9	1526.0	1373.1
73°	2012.3	1938.5	1856.0	1809.5	1704.7	1691.0	1570.7	1591.3	1429.7	1475.3	1314.6
75°	1829.3	1849.1	1650.5	1669.5	1487.3	1508.8	1320.7	1344.8	1146.1	1180.6	973.5
77.5°	1233.0	1299.2	1076.6	1160.0	934.0	1017.3	762.1	769.8	561.9	525.0	356.5
80°	610.8	667.6	473.5	517.2	347.1	341.2	208.0	172.7	147.0	150.4	154.7
82.5°	176.2	198.4	122.9	122.0	86.8	82.5	82.5	87.7	89.3	99.7	97.1
85°	33.5	40.3	35.2	47.3	42.1	46.4	43.0	49.9	46.4	57.6	49.9
87.5°	0.9	0.0	0.9	2.5	2.5	6.0	4.3	6.8	6.8	12.0	11.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	10.8	11.8	12.8	11.3	9.8	8.4	6.8	6.4	5.9	5.4	4.9
100°	30.5	30.9	31.4	30.9	30.5	29.9	29.5	28.7	27.9	27.3	26.5
102.5°	49.6	49.9	50.0	49.9	49.6	49.2	49.0	48.6	48.1	47.6	47.1
105°	69.2	69.5	69.7	69.7	69.7	69.7	69.7	69.2	68.7	68.2	67.7
107.5°	90.3	90.8	91.3	91.1	90.8	90.5	90.3	90.1	89.8	89.5	89.3



REPORT NUMBER: P271450

CATALOG NUMBER: ISC-AF-450-LED-E1-T4W-7027-ULG

CANDELA DISTRIBUTION (continued):

	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
110°	110.9	111.4	111.9	111.9	111.9	111.9	111.9	111.7	111.4	111.1	110.9
112.5°	132.5	132.9	133.5	133.5	133.5	133.5	133.5	133.3	132.9	132.7	132.5
115°	154.1	154.6	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0
117.5°	176.2	176.4	176.7	176.9	177.1	177.4	177.7	177.4	177.1	176.9	176.7
120°	199.2	199.7	200.2	200.2	200.2	200.2	200.2	200.2	200.2	200.2	200.2
122.5°	223.3	223.6	223.8	223.8	223.8	223.8	223.8	223.9	224.3	224.6	224.8
125°	247.8	248.1	248.3	248.5	248.8	249.1	249.3	249.3	249.3	249.3	249.3
127.5°	271.8	272.4	272.8	272.6	272.4	272.1	271.8	272.1	272.4	272.6	272.8
130°	294.5	294.9	295.5	295.5	295.5	295.5	295.5	295.6	295.9	296.2	296.4
132.5°	317.6	318.2	319.0	319.0	319.0	319.0	319.0	319.2	319.4	319.8	320.0
135°	340.1	340.7	341.5	341.5	341.5	341.5	341.5	341.7	342.1	342.3	342.5
137.5°	361.2	361.7	362.2	362.2	362.2	362.2	362.2	362.4	362.6	362.9	363.2
140°	382.3	382.6	382.8	382.8	382.8	382.8	382.8	383.3	383.8	384.3	384.7
142.5°	403.4	403.9	404.3	404.3	404.3	404.3	404.3	404.6	404.9	405.1	405.3
145°	425.0	425.4	426.0	425.8	425.4	425.2	425.0	425.2	425.4	425.8	426.0
147.5°	445.1	445.4	445.6	445.1	444.6	444.1	443.7	443.9	444.1	444.4	444.6
150°	461.8	462.1	462.3	461.8	461.3	460.8	460.3	460.3	460.3	460.3	460.3
152.5°	477.4	477.8	478.0	477.8	477.4	477.2	477.0	477.0	477.0	477.0	477.0
155°	494.2	494.4	494.7	494.4	494.2	493.9	493.7	493.9	494.2	494.4	494.7
157.5°	509.4	509.4	509.4	508.9	508.4	507.9	507.5	507.6	507.9	508.2	508.4
160°	522.2	522.2	522.2	521.6	521.2	520.7	520.2	520.2	520.2	520.2	520.2
162.5°	531.4	531.8	532.0	531.4	531.0	530.4	530.0	529.6	529.0	528.6	528.0
165°	542.3	542.6	542.8	541.9	541.3	540.6	539.8	539.3	538.8	538.4	537.8
167.5°	549.7	549.7	549.7	549.1	548.7	548.1	547.7	547.9	548.1	548.4	548.7
170°	555.1	554.7	554.5	554.3	554.1	553.7	553.5	554.1	554.5	555.1	555.5
172.5°	557.9	558.3	558.5	557.9	557.5	556.9	556.5	556.7	556.9	557.3	557.5
175°	561.9	562.2	562.4	561.6	560.9	560.3	559.5	558.9	558.5	557.9	557.5
177.5°	566.3	566.3	566.3	565.6	564.9	564.1	563.3	563.3	563.3	563.3	563.3
180°	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3



REPORT NUMBER: P271450

CATALOG NUMBER: ISC-AF-450-LED-E1-T4W-7027-ULG

CANDELA DISTRIBUTION (continued):

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7
2.5°	316.2	320.4	318.8	317.0	315.3	314.5	311.0	312.8	308.5	311.9	308.5
5°	309.4	314.5	311.9	308.5	306.7	305.1	299.0	303.3	296.4	302.5	297.2
7.5°	301.7	310.2	307.6	304.2	300.8	299.0	287.0	296.4	286.1	294.7	286.1
10°	299.0	308.5	305.1	300.8	297.2	295.6	281.0	292.2	281.0	290.4	279.2
12.5°	297.2	308.5	303.3	299.0	295.6	292.9	276.7	290.4	275.8	289.5	276.7
15°	295.6	308.5	301.7	296.4	292.9	290.4	273.3	288.6	272.4	287.9	273.3
17.5°	293.8	306.0	299.9	293.8	290.4	288.6	269.9	286.1	269.0	286.1	271.5
20°	291.3	303.3	296.4	290.4	287.0	284.4	265.4	282.7	264.6	281.8	265.4
22.5°	287.9	300.8	294.7	288.6	285.2	281.0	260.4	278.4	259.5	276.7	261.1
25°	288.6	302.5	294.7	288.6	283.5	279.2	256.9	276.7	255.2	272.4	255.2
27.5°	292.9	305.1	297.2	292.2	285.2	280.1	256.9	274.9	253.5	268.1	250.1
30°	301.7	313.6	306.7	299.0	292.9	286.1	261.1	275.8	253.5	262.9	244.9
32.5°	316.2	327.3	320.4	314.5	307.6	297.2	269.9	280.1	255.2	259.5	240.6
35°	335.1	348.8	345.4	341.2	332.6	314.5	284.4	286.1	258.6	256.1	234.5
37.5°	366.0	384.9	384.0	383.1	373.8	341.2	300.8	298.1	262.0	253.5	226.8
40°	406.4	428.7	434.8	440.8	421.0	372.9	319.7	310.2	263.8	248.3	214.9
42.5°	453.6	483.7	501.8	512.9	476.9	408.1	341.2	323.9	263.8	240.6	201.1
45°	512.1	547.3	581.7	593.7	538.7	446.0	363.5	335.1	260.4	228.6	183.1
47.5°	583.4	624.6	671.9	678.0	605.7	486.3	378.9	342.8	249.2	212.2	166.6
50°	662.5	712.3	782.0	777.7	677.1	528.5	389.2	348.0	229.3	193.3	147.0
52.5°	750.9	813.7	912.5	892.7	763.9	580.8	398.7	354.9	205.4	170.9	127.2
55°	861.8	936.6	1060.3	1018.2	860.0	638.4	412.4	355.7	173.6	144.4	112.6
57.5°	981.3	1061.2	1219.3	1142.7	950.2	683.1	406.4	328.2	141.8	122.0	101.4
60°	1124.8	1221.9	1378.2	1258.7	1026.0	698.5	364.4	270.7	121.1	110.0	96.2
62.5°	1285.5	1381.6	1508.8	1339.6	1068.9	672.8	270.7	187.3	103.9	97.9	88.6
65°	1456.4	1547.5	1571.6	1346.4	1040.6	559.4	167.5	122.9	90.2	87.7	81.7
67.5°	1613.6	1622.2	1512.3	1234.7	903.1	390.1	114.3	97.9	83.4	82.5	79.1
70°	1654.0	1505.4	1257.1	961.5	652.2	232.0	92.7	85.1	79.9	79.9	77.3
72.5°	1381.6	1146.1	840.4	582.6	355.7	123.8	79.1	77.3	75.5	75.5	73.9
73°	1295.7	1056.0	752.7	508.7	300.8	110.9	77.3	75.5	74.8	73.9	73.0
75°	860.9	663.3	427.1	257.7	140.0	79.9	68.7	68.7	67.9	68.7	67.9
77.5°	331.7	250.1	165.0	110.9	79.9	62.7	58.4	59.3	58.4	60.2	59.3
80°	146.1	144.4	109.1	78.2	58.4	47.3	47.3	47.3	48.1	49.0	49.0
82.5°	99.7	84.2	64.5	48.1	35.2	34.3	35.2	35.2	36.1	36.9	36.1
85°	55.0	46.4	34.3	21.5	19.0	23.2	23.2	23.2	22.4	22.4	21.5
87.5°	17.2	12.8	9.4	2.5	4.3	4.3	6.0	5.2	5.2	6.0	6.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	4.7	4.4	4.0	4.0	4.0	4.4	4.7	4.9	5.4	5.9	6.4
100°	26.3	26.1	25.5	24.5	25.5	26.1	26.3	26.5	27.3	27.9	28.7
102.5°	47.3	47.6	48.1	47.1	48.1	47.6	47.3	47.1	47.6	48.1	48.6
105°	68.2	68.7	69.7	67.7	69.7	68.7	68.2	67.7	68.2	68.7	69.2
107.5°	89.5	89.8	90.3	89.3	90.3	89.8	89.5	89.3	89.5	89.8	90.1



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°	
110°	111.1	111.4	111.9	110.9	111.9	111.4	111.1	110.9	111.1	111.4	111.7	0°
112.5°	132.9	133.5	134.5	132.5	134.5	133.5	132.9	132.5	132.7	132.9	133.3	2.5°
115°	155.6	156.0	157.0	156.0	157.0	156.0	155.6	155.0	155.0	155.0	155.0	5°
117.5°	177.1	177.7	178.7	176.7	178.7	177.7	177.1	176.7	176.9	177.1	177.4	7.5°
120°	200.7	201.2	202.2	200.2	202.2	201.2	200.7	200.2	200.2	200.2	200.2	10°
122.5°	225.7	226.7	228.7	227.7	228.7	226.7	225.7	224.8	224.6	224.3	223.9	12.5°
125°	250.1	250.8	252.2	251.3	252.2	250.8	250.1	249.3	249.3	249.3	249.3	15°
127.5°	273.6	274.3	275.8	272.8	275.8	274.3	273.6	272.8	272.6	272.4	272.1	17.5°
130°	297.2	297.9	299.3	297.4	299.3	297.9	297.2	296.4	296.2	295.9	295.6	20°
132.5°	320.8	321.4	322.9	321.0	322.9	321.4	320.8	320.0	319.8	319.4	319.2	22.5°
135°	343.1	343.5	344.5	343.5	344.5	343.5	343.1	342.5	342.3	342.1	341.7	25°
137.5°	364.2	365.1	367.0	365.1	367.0	365.1	364.2	363.2	362.9	362.6	362.4	27.5°
140°	385.7	386.7	388.7	386.7	388.7	386.7	385.7	384.7	384.3	383.8	383.3	30°
142.5°	406.1	406.8	408.3	407.3	408.3	406.8	406.1	405.3	405.1	404.9	404.6	32.5°
145°	426.8	427.4	428.9	427.0	428.9	427.4	426.8	426.0	425.8	425.4	425.2	35°
147.5°	445.4	446.1	447.5	444.6	447.5	446.1	445.4	444.6	444.4	444.1	443.9	37.5°
150°	461.3	462.3	464.2	461.3	464.2	462.3	461.3	460.3	460.3	460.3	460.3	40°
152.5°	477.8	478.4	480.0	477.0	480.0	478.4	477.8	477.0	477.0	477.0	477.0	42.5°
155°	495.4	496.1	497.6	495.7	497.6	496.1	495.4	494.7	494.4	494.2	493.9	45°
157.5°	509.6	510.9	513.3	510.3	513.3	510.9	509.6	508.4	508.2	507.9	507.6	47.5°
160°	520.9	521.6	523.2	521.2	523.2	521.6	520.9	520.2	520.2	520.2	520.2	50°
162.5°	528.6	529.0	530.0	527.0	530.0	529.0	528.6	528.0	528.6	529.0	529.6	52.5°
165°	538.4	538.8	539.8	537.8	539.8	538.8	538.4	537.8	538.4	538.8	539.3	55°
167.5°	549.7	550.6	552.5	550.6	552.5	550.6	549.7	548.7	548.4	548.1	547.9	57.5°
170°	556.7	557.9	560.5	558.5	560.5	557.9	556.7	555.5	555.1	554.5	554.1	60°
172.5°	558.3	558.9	560.5	557.5	560.5	558.9	558.3	557.5	557.3	556.9	556.7	62.5°
175°	558.3	558.9	560.5	557.5	560.5	558.9	558.3	557.5	557.9	558.5	558.9	65°
177.5°	564.1	564.9	566.3	563.3	566.3	564.9	564.1	563.3	563.3	563.3	563.3	67.5°
180°	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	70°
												72.5°
												73°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°

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REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°	110°	115°
319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	319.7	110°	111.9
311.9	309.4	311.9	307.6	311.0	307.6	310.2	310.2	309.4	309.4	309.4	112.5°	133.5
301.7	297.2	301.7	299.0	301.7	298.1	300.8	301.7	302.5	305.1	304.2	115°	155.0
293.8	285.2	294.7	286.1	293.8	286.1	292.9	293.8	296.4	299.9	302.5	117.5°	177.7
290.4	279.2	290.4	280.1	289.5	281.0	289.5	290.4	292.9	297.2	301.7	120°	200.2
288.6	276.7	288.6	278.4	288.6	280.1	288.6	291.3	292.9	296.4	301.7	122.5°	223.8
287.0	274.9	288.6	277.6	288.6	280.1	289.5	291.3	293.8	297.2	301.7	125°	249.3
286.1	272.4	287.0	276.7	287.0	278.4	288.6	288.6	292.2	296.4	299.0	127.5°	271.8
282.7	269.9	282.7	272.4	282.7	274.9	283.5	283.5	287.0	288.6	292.9	130°	295.5
277.6	263.8	275.8	266.3	275.8	268.1	274.9	274.9	277.6	280.1	282.7	132.5°	319.0
269.9	256.9	267.2	258.6	265.4	258.6	263.8	262.9	264.6	266.3	268.1	135°	341.5
261.1	248.3	256.9	247.4	251.7	244.9	248.3	246.7	247.4	248.3	249.2	137.5°	362.2
251.7	238.9	243.2	234.5	235.4	228.6	230.2	227.7	226.8	225.9	224.3	140°	382.8
241.5	227.7	227.7	219.1	217.4	211.4	211.4	208.0	205.4	201.8	198.4	142.5°	404.3
228.6	216.5	210.6	203.6	200.2	194.2	193.3	189.0	183.1	177.0	173.6	145°	425.0
215.6	201.8	193.3	186.5	183.1	178.8	177.9	174.5	167.5	160.7	155.6	147.5°	443.7
198.4	184.7	175.3	172.7	170.0	166.6	167.5	163.2	156.3	148.7	144.4	150°	460.3
181.3	169.3	161.5	160.7	159.0	158.1	159.0	155.6	147.8	140.9	135.7	152.5°	477.0
166.6	154.7	147.0	146.1	145.3	148.7	149.5	148.7	140.0	133.2	126.3	155°	493.7
152.2	137.5	132.3	130.6	131.4	136.6	138.2	140.9	133.2	125.4	116.0	157.5°	507.5
134.8	121.1	119.5	117.7	118.6	122.9	127.2	132.3	125.4	114.3	101.4	160°	520.2
119.5	107.3	108.2	106.6	108.2	111.7	115.2	123.8	115.2	103.9	97.9	162.5°	530.0
107.3	97.9	99.7	97.9	99.7	103.9	106.6	113.5	113.5	110.9	105.7	165°	539.8
98.8	92.0	93.6	92.0	94.5	97.9	100.5	115.2	123.8	116.9	106.6	167.5°	547.7
93.6	87.7	88.6	86.8	88.6	93.6	98.8	116.0	129.7	116.0	108.2	170°	553.5
85.9	80.8	79.9	79.9	81.7	90.2	92.7	108.2	128.0	115.2	109.1	172.5°	556.5
80.8	76.4	75.5	74.8	76.4	82.5	85.1	100.5	123.8	109.1	98.8	175°	559.5
78.2	74.8	73.0	71.3	73.0	78.2	80.8	94.5	116.9	103.9	92.7	177.5°	563.3
75.5	72.1	71.3	69.6	70.4	73.9	77.3	86.8	110.9	97.9	86.8	180°	565.3
72.1	68.7	67.9	65.3	66.1	69.6	71.3	81.7	103.1	92.0	80.8		
71.3	67.9	67.0	64.5	65.3	67.9	69.6	79.9	101.4	91.1	79.9		
67.0	63.6	62.7	61.1	61.8	61.8	63.6	73.0	96.2	85.9	74.8		
59.3	56.8	55.9	54.2	53.3	52.4	55.0	64.5	87.7	77.3	60.2		
49.0	46.4	45.5	42.1	42.1	42.1	45.5	55.0	65.3	55.9	46.4		
36.1	34.3	34.3	31.8	30.9	30.0	32.7	37.8	51.6	43.7	36.1		
21.5	20.6	21.5	19.0	19.8	19.0	21.5	26.6	28.4	22.4	17.2		
5.2	6.0	6.0	6.0	5.2	5.2	4.3	3.4	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
6.8	8.4	9.8	11.3	12.8	11.8	10.8	8.8	4.0	3.0	2.0		
29.5	29.9	30.5	30.9	31.4	30.9	30.5	29.5	21.6	13.7	9.8		
49.0	49.2	49.6	49.9	50.0	49.9	49.6	49.0	44.2	37.3	31.4		
69.7	69.7	69.7	69.7	69.7	69.5	69.2	68.7	64.8	59.8	55.0		
90.3	90.5	90.8	91.1	91.3	90.8	90.3	89.3	86.3	82.5	78.5		

271450
 ISC-AF-450-LED-E1-T4W-7027-ULG

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TION (continued):

CANDELA DISTRIBUTION (con

117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°		175°	180°
111.9	111.9	111.9	111.9	111.4	110.9	110.0	108.0	104.0	101.1	0°	319.7	319.7
133.5	133.5	133.5	133.5	132.9	132.5	131.5	129.5	126.6	123.7	2.5°	308.5	307.6
155.0	155.0	155.0	155.0	154.6	154.1	153.1	151.2	148.2	146.2	5°	304.2	304.2
177.4	177.1	176.9	176.7	176.4	176.2	175.7	173.7	170.8	168.8	7.5°	302.5	302.5
200.2	200.2	200.2	200.2	199.7	199.2	198.3	197.3	194.3	192.3	10°	303.3	303.3
223.8	223.8	223.8	223.8	223.6	223.3	222.8	221.8	218.8	216.9	12.5°	303.3	305.1
249.1	248.8	248.5	248.3	248.1	247.8	247.3	246.3	243.4	242.5	15°	306.0	305.1
272.1	272.4	272.6	272.8	272.4	271.8	270.9	269.0	267.0	265.0	17.5°	303.3	303.3
295.5	295.5	295.5	295.5	294.9	294.5	293.5	292.5	288.5	287.5	20°	296.4	298.1
319.0	319.0	319.0	319.0	318.2	317.6	316.0	315.0	312.1	311.2	22.5°	287.0	287.0
341.5	341.5	341.5	341.5	340.7	340.1	338.6	338.6	334.7	332.7	25°	271.5	272.4
362.2	362.2	362.2	362.2	361.7	361.2	360.2	360.2	357.3	356.3	27.5°	250.9	252.6
382.8	382.8	382.8	382.8	382.6	382.3	381.8	380.8	378.8	377.8	30°	225.1	226.8
404.3	404.3	404.3	404.3	403.9	403.4	402.4	402.4	399.5	400.5	32.5°	195.9	197.6
425.2	425.4	425.8	426.0	425.4	425.0	424.0	423.0	420.0	420.0	35°	172.7	173.6
444.1	444.6	445.1	445.6	445.4	445.1	444.6	443.7	439.7	438.7	37.5°	157.2	157.2
460.8	461.3	461.8	462.3	462.1	461.8	461.3	460.3	456.4	455.4	40°	144.4	144.4
477.2	477.4	477.8	478.0	477.8	477.4	477.0	476.0	473.0	474.0	42.5°	132.3	131.4
493.9	494.2	494.4	494.7	494.4	494.2	493.7	493.7	491.7	492.7	45°	120.4	118.6
507.9	508.4	508.9	509.4	509.4	509.4	509.4	509.4	506.5	507.5	47.5°	108.2	107.3
520.7	521.2	521.6	522.2	522.2	522.2	522.2	522.2	519.2	519.2	50°	97.9	97.9
530.4	531.0	531.4	532.0	531.8	531.4	531.0	531.0	528.0	529.0	52.5°	99.7	99.7
540.6	541.3	541.9	542.8	542.6	542.3	541.8	541.8	537.8	538.8	55°	107.3	107.3
548.1	548.7	549.1	549.7	549.7	549.7	549.7	550.6	547.7	548.7	57.5°	108.2	107.3
553.7	554.1	554.3	554.5	554.7	555.1	555.5	556.5	554.5	555.5	60°	117.7	116.9
556.9	557.5	557.9	558.5	558.3	557.9	557.5	558.5	556.5	558.5	62.5°	122.9	125.4
560.3	560.9	561.6	562.4	562.2	561.9	561.4	561.4	558.5	559.5	65°	107.3	103.9
564.1	564.9	565.6	566.3	566.3	566.3	566.3	567.3	563.3	564.3	67.5°	102.2	97.1
565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	70°	92.0	84.2
										72.5°	81.7	77.3
										73°	79.1	75.5
										75°	70.4	68.7
										77.5°	53.3	52.4
										80°	44.6	43.7
										82.5°	30.0	28.4
										85°	12.8	12.0
										87.5°	0.0	0.0
										90°	0.0	0.0
										92.5°	0.0	0.0
										95°	1.0	1.0
										97.5°	2.0	2.0
										100°	7.8	7.8
										102.5°	27.5	27.5
										105°	53.0	53.0
										107.5°	75.5	76.5



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CANDELA DISTRIBUTION (continued):

	175°	180°
110°	100.1	99.2
112.5°	121.7	121.7
115°	144.3	143.3
117.5°	166.8	165.8
120°	191.4	189.5
122.5°	216.0	215.0
125°	241.5	239.5
127.5°	264.0	262.0
130°	286.6	284.7
132.5°	308.2	307.2
135°	330.8	329.8
137.5°	353.3	352.3
140°	375.9	375.0
142.5°	398.5	396.5
145°	418.1	417.2
147.5°	435.8	435.8
150°	453.5	452.5
152.5°	471.1	470.2
155°	490.7	489.8
157.5°	505.5	503.5
160°	517.2	515.3
162.5°	526.0	525.1
165°	536.8	535.9
167.5°	545.7	544.7
170°	552.5	551.6
172.5°	555.5	554.5
175°	558.5	556.5
177.5°	562.4	561.4
180°	565.3	565.3

(END OF REPORT)

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

