

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: P271443

Luminaire Tested: **ISC-AF-450-LED-E1-SL3-7027-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P271443  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29762)-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-SL3-7027-ULG  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III W/SPILL CONTROL, 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: 3821.1 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B0 - 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

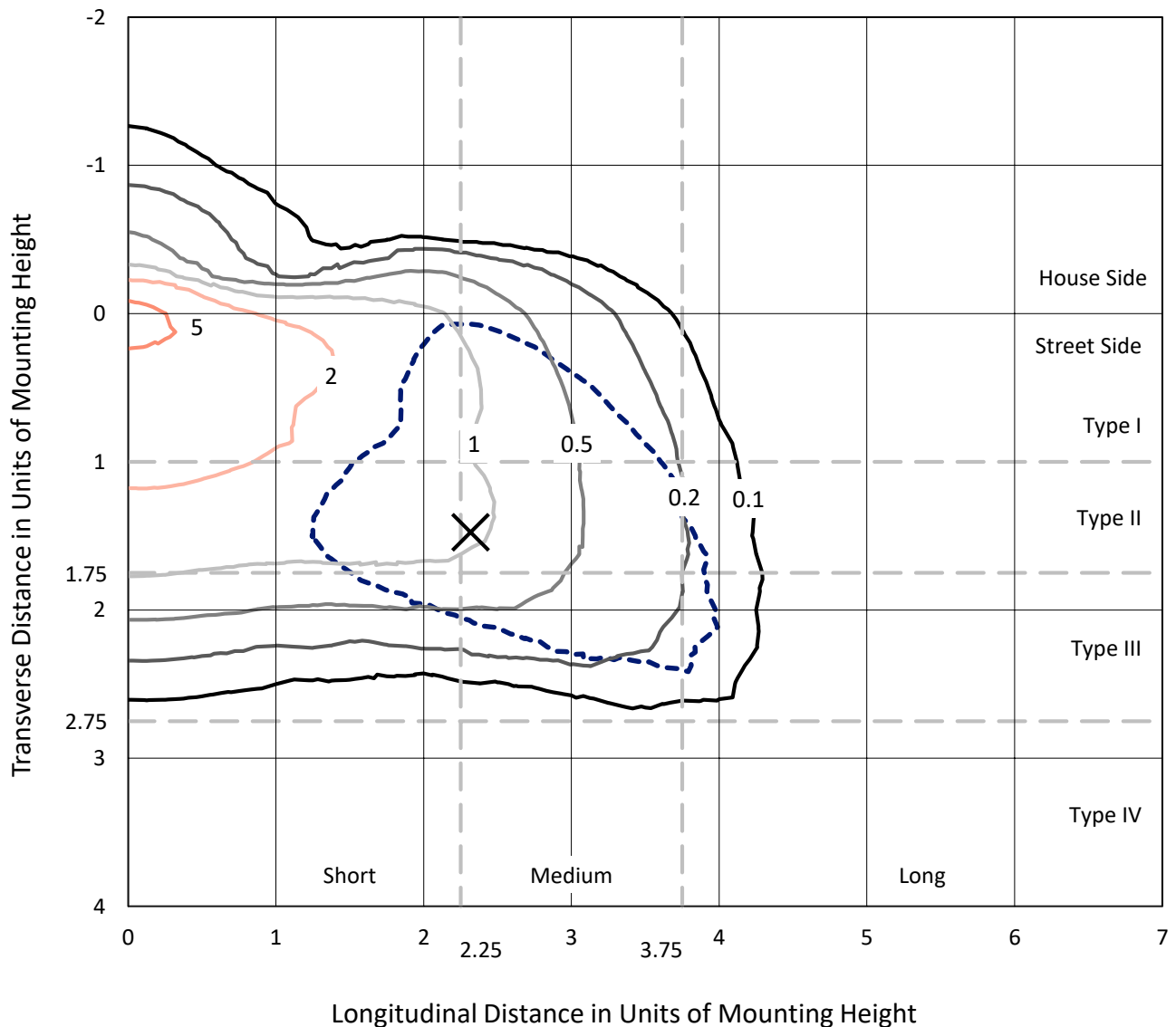


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### Iso-Footcandle Lines of Horizontal Illumination

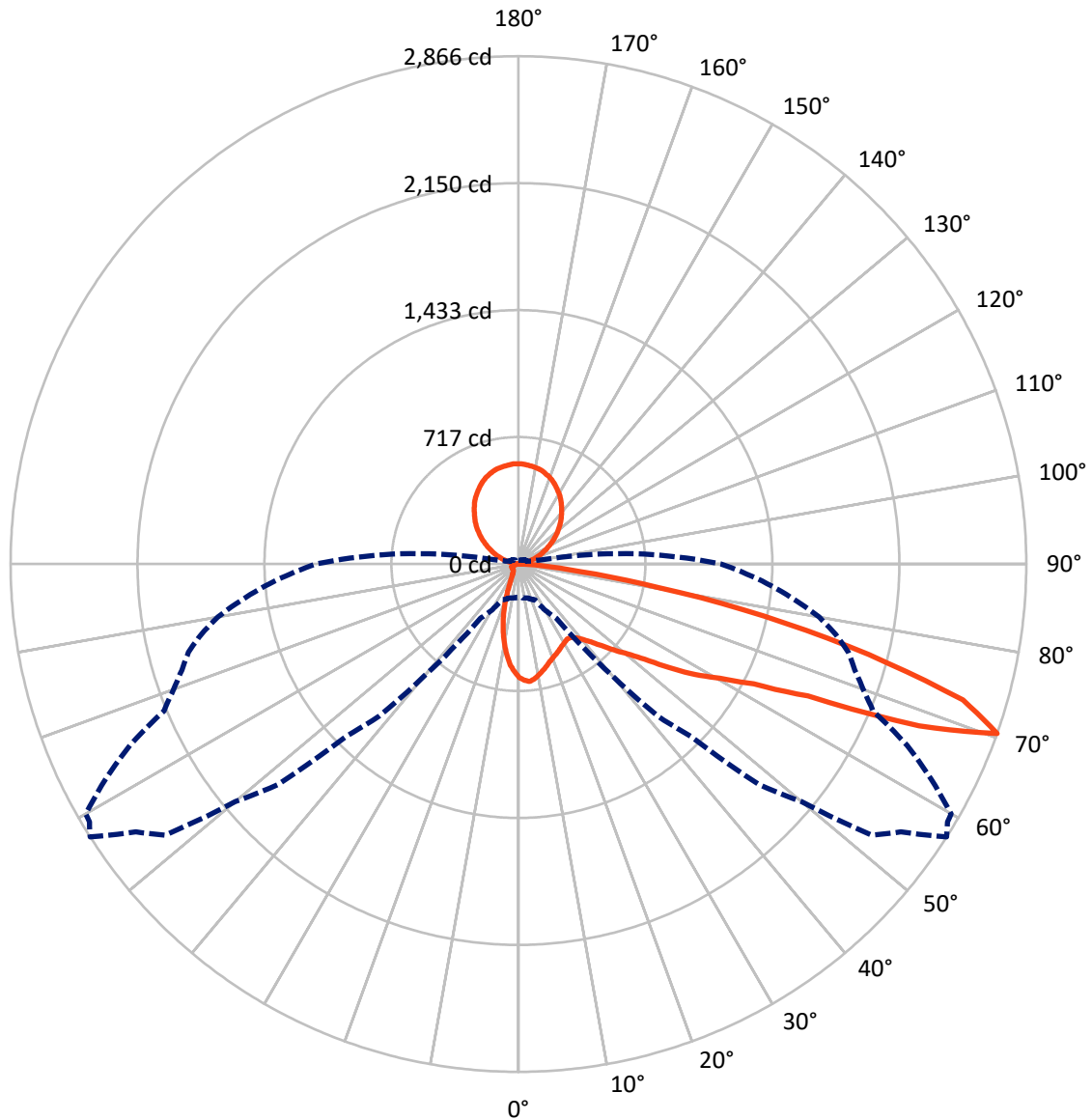
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.4 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57.5-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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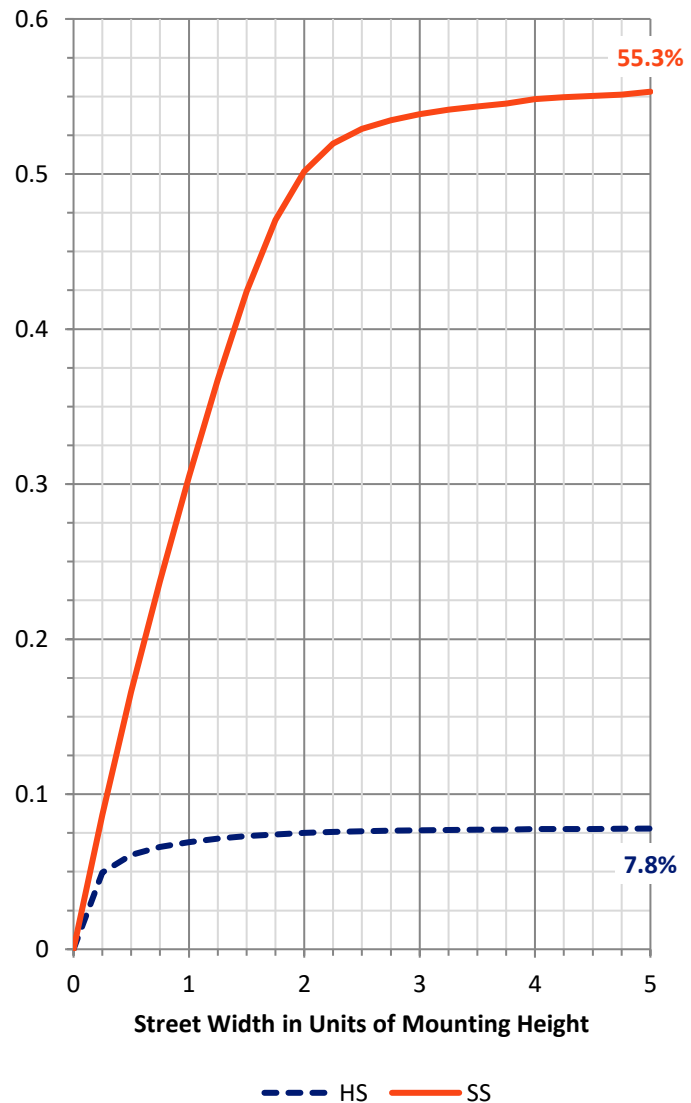
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	299.6	699.9	999.5
	% Fixture	7.8	18.3	26.2
<b>Street Side</b>	Lumens	2121.7	699.9	2821.6
	% Fixture	55.5	18.3	73.8
<b>Total</b>	Lumens	2421.3	1399.8	3821.1
	% Fixture	63.4	36.6	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.3	1.4
10°-20°	120.1	3.1
20°-30°	151.0	4.0
30°-40°	197.3	5.2
40°-50°	296.0	7.7
50°-60°	468.0	12.2
60°-70°	674.6	17.7
70°-80°	417.5	10.9
80°-90°	41.4	1.1
90°-100°	4.7	0.1
100°-110°	67.7	1.8
110°-120°	150.2	3.9
120°-130°	219.7	5.7
130°-140°	260.7	6.8
140°-150°	264.3	6.9
150°-160°	226.8	5.9
160°-170°	152.2	4.0
170°-180°	53.3	1.4
0°-90°	2421.3	63.4
0°-180°	3821.1	100.0



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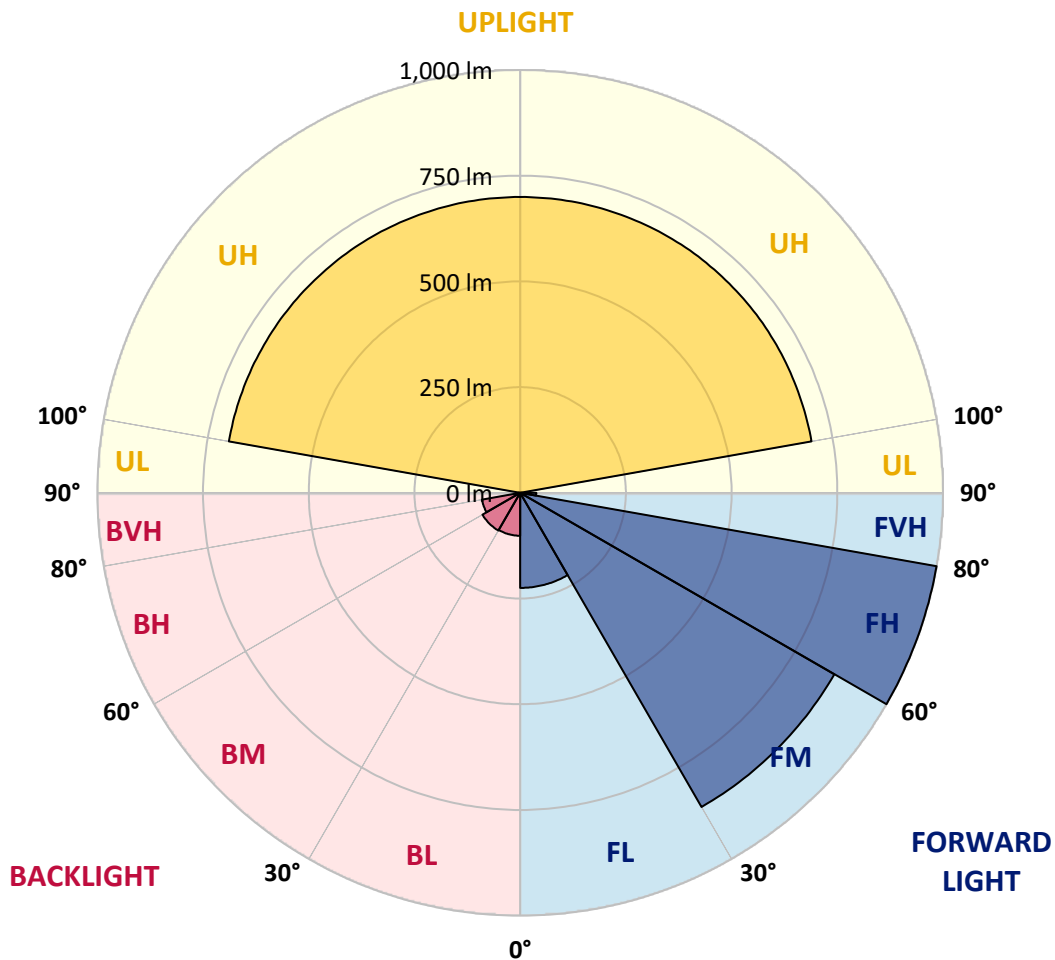
CATALOG NUMBER: ISC-AF-450-LED-E1-SL3-7027-ULG

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	224.9	5.9			
FM	(30°-60°)	858.3	22.5			
FH	(60°-80°)	1000.4	26.2			G1/1800
FVH	(80°-90°)	38.1	1.0			G1/100
BL	(0°-30°)	101.6	2.7	B0/110		
BM	(30°-60°)	103.0	2.7	B0/220		
BH	(60°-80°)	91.7	2.4	B0/110		G0/110
BVH	(80°-90°)	3.3	0.1			G0/10
UL	(90°-100°)	4.7	0.1		U1/10	
UH	(100°-180°)	699.9	18.3		U4/1000	

**BUG Rating: B0-U5-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9
2.5°	672.7	671.8	670.0	666.6	664.9	666.6	664.9	662.4	659.0	661.5	659.7
5°	670.9	672.7	669.2	666.6	670.9	672.7	669.2	669.2	665.8	669.2	667.5
7.5°	637.4	638.2	639.1	638.2	649.5	649.5	647.8	649.5	650.4	652.1	652.9
10°	595.4	596.3	597.9	600.4	614.2	616.0	616.9	618.6	621.1	622.9	627.9
12.5°	553.3	555.0	558.4	567.0	581.7	583.3	586.0	588.5	592.8	595.4	604.8
15°	518.1	519.0	522.4	531.8	553.3	557.6	559.3	562.7	571.3	571.3	581.7
17.5°	485.4	487.2	489.7	500.9	522.4	529.2	534.3	536.1	547.2	549.9	561.8
20°	460.5	461.3	462.2	472.5	492.2	502.5	506.8	513.7	522.4	529.2	539.5
22.5°	446.7	447.5	445.9	450.2	467.4	480.2	485.4	492.2	495.7	507.7	513.7
25°	447.5	448.4	444.1	441.6	450.2	464.0	468.2	475.0	473.4	490.6	490.6
27.5°	456.2	457.9	453.6	445.9	446.7	457.9	460.5	463.1	457.9	475.0	471.6
30°	473.4	475.0	469.9	464.0	454.5	461.3	461.3	461.3	451.8	466.5	460.5
32.5°	491.5	493.1	491.5	487.2	475.0	476.8	473.4	471.6	458.8	470.8	461.3
35°	518.1	519.0	519.8	519.8	502.5	506.0	496.5	491.5	479.3	488.8	475.9
37.5°	549.9	549.9	555.8	558.4	539.5	539.5	529.2	522.4	511.1	514.5	501.7
40°	578.1	580.8	594.5	602.2	585.1	578.1	569.5	563.6	555.0	555.0	542.0
42.5°	610.8	616.0	632.2	646.9	637.4	627.2	618.6	612.6	608.2	607.3	593.6
45°	651.2	657.2	675.3	689.0	691.5	683.8	677.0	670.9	667.5	665.8	653.8
47.5°	696.7	702.7	719.0	735.4	747.4	745.8	738.0	732.0	734.5	732.7	725.1
50°	747.4	750.8	761.1	780.1	807.6	813.5	811.9	807.6	812.7	812.7	805.8
52.5°	787.7	790.4	798.1	820.4	866.0	879.7	890.8	899.5	908.1	913.1	908.9
55°	824.7	824.7	825.6	853.9	921.8	944.2	969.0	987.1	998.3	1018.9	1027.5
57.5°	884.9	880.6	879.7	909.7	988.9	1012.0	1048.1	1073.8	1089.4	1131.4	1130.6
60°	867.8	869.4	900.3	988.9	1126.3	1146.9	1179.6	1207.1	1236.2	1267.1	1269.8
62.5°	748.3	752.6	799.0	931.3	1213.9	1321.2	1421.7	1498.2	1541.2	1568.7	1530.9
65°	524.0	534.3	597.0	758.6	1117.7	1283.5	1442.4	1619.4	1755.1	1965.6	2026.6
67.5°	261.1	269.0	279.2	397.8	835.1	1067.8	1286.9	1528.4	1708.8	2018.0	2190.7
70°	187.3	190.7	198.4	223.4	373.8	559.3	817.0	1162.4	1374.6	1841.1	2085.1
72.5°	145.2	148.6	158.9	194.1	247.4	273.2	324.7	530.9	789.5	1271.4	1601.4
75°	112.6	117.7	132.3	175.3	238.1	252.5	255.2	274.1	312.7	564.5	897.8
77.5°	79.1	79.9	94.5	151.3	231.1	259.4	255.2	255.2	260.3	287.7	384.0
80°	52.4	53.3	62.7	104.8	202.7	236.3	261.1	249.1	250.0	254.3	261.1
82.5°	27.5	29.3	36.9	63.6	118.6	159.8	217.4	226.8	223.4	227.7	225.9
85°	7.7	7.7	12.8	24.1	58.4	61.8	96.2	131.4	133.9	152.0	162.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.4	7.7	8.6
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	9.8	10.8
100°	7.8	7.8	9.8	13.7	21.6	23.5	25.5	27.5	29.5	29.9	30.5
102.5°	27.5	27.5	31.4	37.3	44.2	45.4	46.6	47.9	49.0	49.2	49.6
105°	53.0	53.0	55.0	59.8	64.8	65.8	66.7	67.7	68.7	68.9	69.2
107.5°	76.5	75.5	78.5	82.5	86.3	87.1	87.9	88.6	89.3	89.8	90.3
110°	99.2	100.1	101.1	104.0	108.0	108.4	109.0	109.4	110.0	110.4	110.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
112.5°	121.7	121.7	123.7	126.6	129.5	130.1	130.5	131.1	131.5	132.1	132.5
115°	143.3	144.3	146.2	148.2	151.2	151.6	152.2	152.6	153.1	153.6	154.1
117.5°	165.8	166.8	168.8	170.8	173.7	174.2	174.7	175.2	175.7	175.9	176.2
120°	189.5	191.4	192.3	194.3	197.3	197.4	197.8	198.1	198.3	198.7	199.2
122.5°	215.0	216.0	216.9	218.8	221.8	222.0	222.3	222.6	222.8	223.0	223.3
125°	239.5	241.5	242.5	243.4	246.3	246.6	246.9	247.1	247.3	247.6	247.8
127.5°	262.0	264.0	265.0	267.0	269.0	269.4	269.9	270.4	270.9	271.4	271.8
130°	284.7	286.6	287.5	288.5	292.5	292.7	292.9	293.3	293.5	293.9	294.5
132.5°	307.2	308.2	311.2	312.1	315.0	315.2	315.6	315.8	316.0	316.8	317.6
135°	329.8	330.8	332.7	334.7	338.6	338.6	338.6	338.6	338.6	339.4	340.1
137.5°	352.3	353.3	356.3	357.3	360.2	360.2	360.2	360.2	360.2	360.7	361.2
140°	375.0	375.9	377.8	378.8	380.8	381.0	381.3	381.6	381.8	382.0	382.3
142.5°	396.5	398.5	400.5	399.5	402.4	402.4	402.4	402.4	402.4	402.9	403.4
145°	417.2	418.1	420.0	420.0	423.0	423.2	423.6	423.8	424.0	424.4	425.0
147.5°	435.8	435.8	438.7	439.7	443.7	443.9	444.1	444.4	444.6	444.8	445.1
150°	452.5	453.5	455.4	456.4	460.3	460.5	460.8	461.1	461.3	461.5	461.8
152.5°	470.2	471.1	474.0	473.0	476.0	476.2	476.6	476.8	477.0	477.2	477.4
155°	489.8	490.7	492.7	491.7	493.7	493.7	493.7	493.7	493.7	493.9	494.2
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	531.4
165°	535.9	536.8	538.8	537.8	541.8	541.8	541.8	541.8	541.8	541.9	542.3
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	555.1
172.5°	554.5	555.5	558.5	556.5	558.5	558.3	557.9	557.7	557.5	557.7	557.9
175°	556.5	558.5	559.5	558.5	561.4	561.4	561.4	561.4	561.4	561.6	561.9
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):**

	52.5°	55°	57.5°	59°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9
2.5°	661.5	658.1	657.2	655.5	656.3	653.8	652.9	649.5	649.5	647.8	646.0
5°	665.8	662.4	665.8	659.7	660.6	658.1	653.8	653.8	650.4	647.8	642.6
7.5°	653.8	653.8	654.7	651.2	652.1	651.2	646.0	645.2	640.0	640.0	634.0
10°	631.4	631.4	634.8	632.2	633.1	632.2	629.7	628.8	627.2	627.2	617.7
12.5°	605.6	610.8	616.0	613.5	613.5	615.1	615.1	616.0	615.1	614.2	606.5
15°	584.2	591.9	597.0	596.3	597.0	601.3	603.1	603.9	606.5	605.6	598.8
17.5°	564.5	573.0	577.3	580.8	583.3	586.8	591.9	594.5	597.9	597.0	590.2
20°	546.3	554.2	561.8	566.1	567.0	573.8	579.9	587.6	589.4	591.1	582.6
22.5°	527.5	534.3	549.9	547.2	553.3	566.1	569.5	580.8	580.8	586.8	574.7
25°	511.1	512.0	536.1	531.8	537.0	560.1	562.7	582.6	577.3	586.0	572.1
27.5°	494.9	494.0	523.3	518.1	524.0	555.8	557.6	585.1	579.9	590.2	572.1
30°	482.7	480.2	513.7	503.4	512.0	551.5	552.4	587.6	583.3	597.0	578.1
32.5°	480.2	475.9	505.2	497.4	506.0	547.2	552.4	597.0	591.9	609.1	585.1
35°	491.5	484.5	509.5	502.5	509.5	549.0	556.7	611.7	605.6	625.4	601.3
37.5°	512.0	506.8	527.5	520.6	525.8	561.0	567.9	630.6	629.7	653.8	626.3
40°	548.1	542.9	559.3	549.9	554.2	586.8	590.2	657.2	659.7	689.0	661.5
42.5°	597.0	588.5	601.3	590.2	596.3	625.4	622.0	689.9	697.5	738.0	706.2
45°	659.7	648.7	656.3	644.4	648.7	673.5	664.0	733.6	741.4	791.2	762.9
47.5°	728.5	714.7	724.2	708.8	711.3	738.0	720.8	786.1	798.1	860.8	833.3
50°	811.0	792.9	796.3	781.7	783.5	810.1	791.2	850.4	865.1	934.7	910.6
52.5°	916.6	890.8	890.8	871.2	872.0	898.7	875.4	926.9	943.3	1013.7	997.4
55°	1055.8	1035.2	1031.0	1010.3	1003.4	1008.5	975.9	1012.0	1030.1	1096.2	1083.4
57.5°	1166.7	1164.0	1177.0	1147.8	1140.8	1142.6	1101.3	1103.9	1124.6	1176.2	1180.5
60°	1301.6	1305.9	1307.6	1283.5	1280.9	1256.9	1214.8	1208.0	1233.6	1268.9	1282.6
62.5°	1516.2	1511.9	1490.5	1472.5	1456.2	1391.7	1368.6	1330.7	1366.8	1386.5	1414.9
65°	1977.6	1933.0	1795.5	1807.5	1764.6	1624.6	1604.8	1528.4	1585.0	1585.9	1639.1
67.5°	2434.7	2522.4	2438.1	2439.8	2342.7	2089.3	2028.4	1876.3	1908.0	1871.1	1898.6
70°	2512.8	2635.6	2866.0	2824.7	2819.5	2624.5	2419.1	2165.7	2070.4	1991.4	1927.9
72.5°	2162.3	2285.2	2622.8	2529.2	2564.4	2623.7	2409.7	2219.9	2006.8	1906.3	1768.9
75°	1521.5	1698.4	2041.2	1992.2	2018.0	2116.0	1932.1	1909.8	1663.2	1596.2	1384.8
77.5°	815.3	1034.4	1418.3	1358.1	1369.4	1425.3	1233.6	1194.2	956.2	890.0	650.4
80°	366.9	508.6	796.3	729.3	709.6	677.8	499.1	393.5	240.6	159.8	110.9
82.5°	243.1	252.5	353.0	305.9	286.1	236.3	152.9	90.2	71.2	60.2	57.5
85°	163.2	149.5	148.6	131.4	122.0	96.2	71.2	44.6	36.9	30.9	28.4
87.5°	9.4	6.0	8.6	9.4	6.8	6.0	4.3	0.0	0.9	0.0	0.9
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°	11.8	12.8	11.3	10.4	9.8	8.4	6.8	6.4	5.9	5.4	4.9
100°	30.9	31.4	30.9	30.6	30.5	29.9	29.5	28.7	27.9	27.3	26.5
102.5°	49.9	50.0	49.9	49.7	49.6	49.2	49.0	48.6	48.1	47.6	47.1
105°	69.5	69.7	69.7	69.7	69.7	69.7	69.7	69.2	68.7	68.2	67.7
107.5°	90.8	91.3	91.1	90.9	90.8	90.5	90.3	90.1	89.8	89.5	89.3
110°	111.4	111.9	111.9	111.9	111.9	111.9	111.9	111.7	111.4	111.1	110.9



REPORT NUMBER: P271443

CATALOG NUMBER: ISC-AF-450-LED-E1-SL3-7027-ULG

**CANDELA DISTRIBUTION (continued):**

	52.5°	55°	57.5°	59°	60°	62.5°	65°	67.5°	70°	72.5°	75°
112.5°	132.9	133.5	133.5	133.5	133.5	133.5	133.5	133.3	132.9	132.7	132.5
115°	154.6	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0
117.5°	176.4	176.7	176.9	177.1	177.1	177.4	177.7	177.4	177.1	176.9	176.7
120°	199.7	200.2	200.2	200.2	200.2	200.2	200.2	200.2	200.2	200.2	200.2
122.5°	223.6	223.8	223.8	223.8	223.8	223.8	223.8	223.9	224.3	224.6	224.8
125°	248.1	248.3	248.5	248.7	248.8	249.1	249.3	249.3	249.3	249.3	249.3
127.5°	272.4	272.8	272.6	272.5	272.4	272.1	271.8	272.1	272.4	272.6	272.8
130°	294.9	295.5	295.5	295.5	295.5	295.5	295.5	295.6	295.9	296.2	296.4
132.5°	318.2	319.0	319.0	319.0	319.0	319.0	319.0	319.2	319.4	319.8	320.0
135°	340.7	341.5	341.5	341.5	341.5	341.5	341.5	341.7	342.1	342.3	342.5
137.5°	361.7	362.2	362.2	362.2	362.2	362.2	362.2	362.4	362.6	362.9	363.2
140°	382.6	382.8	382.8	382.8	382.8	382.8	382.8	383.3	383.8	384.3	384.7
142.5°	403.9	404.3	404.3	404.3	404.3	404.3	404.3	404.6	404.9	405.1	405.3
145°	425.4	426.0	425.8	425.5	425.4	425.2	425.0	425.2	425.4	425.8	426.0
147.5°	445.4	445.6	445.1	444.8	444.6	444.1	443.7	443.9	444.1	444.4	444.6
150°	462.1	462.3	461.8	461.5	461.3	460.8	460.3	460.3	460.3	460.3	460.3
152.5°	477.8	478.0	477.8	477.6	477.4	477.2	477.0	477.0	477.0	477.0	477.0
155°	494.4	494.7	494.4	494.2	494.2	493.9	493.7	493.9	494.2	494.4	494.7
157.5°	509.4	509.4	508.9	508.6	508.4	507.9	507.5	507.6	507.9	508.2	508.4
160°	522.2	522.2	521.6	521.4	521.2	520.7	520.2	520.2	520.2	520.2	520.2
162.5°	531.8	532.0	531.4	531.2	531.0	530.4	530.0	529.6	529.0	528.6	528.0
165°	542.6	542.8	541.9	541.6	541.3	540.6	539.8	539.3	538.8	538.4	537.8
167.5°	549.7	549.7	549.1	548.9	548.7	548.1	547.7	547.9	548.1	548.4	548.7
170°	554.7	554.5	554.3	554.2	554.1	553.7	553.5	554.1	554.5	555.1	555.5
172.5°	558.3	558.5	557.9	557.7	557.5	556.9	556.5	556.7	556.9	557.3	557.5
175°	562.2	562.4	561.6	561.2	560.9	560.3	559.5	558.9	558.5	557.9	557.5
177.5°	566.3	566.3	565.6	565.1	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



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CATALOG NUMBER: ISC-AF-450-LED-E1-SL3-7027-ULG

**CANDELA DISTRIBUTION (continued):**

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9
2.5°	641.7	641.7	640.9	634.8	631.4	629.7	623.7	622.9	620.3	619.4	619.4
5°	640.9	637.4	633.1	624.5	616.0	608.2	605.6	599.7	595.4	590.2	590.2
7.5°	628.8	625.4	616.0	603.1	591.9	580.8	574.7	566.1	559.3	552.4	550.8
10°	615.1	609.9	597.0	579.9	565.2	545.5	537.7	526.7	519.0	508.6	498.3
12.5°	600.4	597.0	581.7	561.8	539.5	514.5	502.5	487.2	476.8	464.7	449.3
15°	594.5	587.6	567.9	542.9	515.4	485.4	468.2	451.8	436.5	422.7	402.0
17.5°	586.8	578.1	555.8	526.7	492.2	456.2	433.8	415.7	395.2	380.6	357.3
20°	578.1	565.2	541.2	506.0	467.4	424.4	396.1	378.0	350.5	335.9	308.4
22.5°	571.3	555.0	525.8	486.3	439.9	391.8	358.2	337.7	306.7	289.5	255.2
25°	569.5	549.9	514.5	469.9	416.6	360.0	319.5	299.0	260.3	240.6	200.1
27.5°	570.4	547.2	507.7	456.2	396.1	331.7	283.4	259.4	210.5	189.8	143.5
30°	571.3	548.1	500.9	444.1	377.2	302.4	245.7	217.4	158.9	140.9	99.6
32.5°	579.9	551.5	499.1	434.7	360.0	273.2	202.7	177.0	112.6	102.2	73.9
35°	590.2	562.7	502.5	433.1	347.0	244.0	158.9	132.3	80.8	78.2	60.2
37.5°	611.7	579.9	516.3	437.3	339.3	213.9	118.6	101.4	63.6	65.3	52.4
40°	644.4	609.1	538.6	450.2	338.5	183.8	87.7	79.1	55.0	56.8	48.1
42.5°	688.1	649.5	573.0	477.7	342.7	155.5	70.4	67.8	50.7	52.4	46.4
45°	745.8	706.2	621.1	512.9	354.8	132.3	61.8	61.8	49.0	50.7	45.5
47.5°	818.7	774.9	680.4	560.1	373.8	119.5	58.4	59.3	48.1	50.7	45.5
50°	901.2	853.1	756.0	621.1	402.9	116.0	59.3	59.3	49.0	50.7	45.5
52.5°	987.1	942.4	837.6	690.7	443.3	123.7	60.9	60.2	49.0	50.7	44.6
55°	1074.7	1034.4	927.8	772.4	499.1	151.3	65.3	62.7	49.0	50.7	45.5
57.5°	1162.4	1134.0	1022.3	859.9	568.6	201.0	82.5	73.0	54.1	55.0	46.4
60°	1261.1	1240.5	1128.8	975.1	667.5	278.4	121.1	92.0	64.4	60.9	49.9
62.5°	1389.2	1384.0	1295.5	1140.8	826.4	390.0	171.8	111.7	69.6	63.6	53.3
65°	1615.2	1628.9	1544.6	1335.0	932.1	392.6	167.5	97.9	65.3	60.2	52.4
67.5°	1841.9	1801.6	1585.0	1305.9	841.0	261.1	106.4	76.4	57.5	55.9	49.0
70°	1833.4	1723.3	1437.3	1141.7	664.0	141.8	77.3	63.6	51.6	51.6	46.4
72.5°	1644.3	1481.0	1175.3	903.8	443.3	90.2	65.3	55.9	47.3	46.4	43.0
75°	1238.0	1045.4	755.1	520.6	197.5	58.4	49.9	45.5	41.2	41.2	37.8
77.5°	582.6	328.2	182.2	121.1	66.1	39.5	34.3	34.3	33.5	34.3	30.9
80°	79.1	71.2	60.9	53.3	40.3	27.5	25.0	25.8	25.0	25.8	23.2
82.5°	48.1	43.0	35.2	33.5	25.0	19.0	18.1	19.0	17.2	18.1	13.7
85°	23.2	20.6	16.3	15.5	12.8	11.2	9.4	11.2	8.6	9.4	6.0
87.5°	0.0	1.8	0.9	1.8	1.8	1.8	0.0	1.8	0.0	1.8	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°	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
110°	111.1	111.4	111.9	110.9	111.9	111.4	111.1	110.9	111.1	111.4	111.7



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

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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°	115°	115°
640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	640.9	112.5°	133.5
615.1	612.6	611.7	608.2	607.3	603.9	603.1	599.7	593.6	591.1	586.8	115°	155.0
582.6	578.1	574.7	573.0	566.1	562.7	557.6	550.8	537.7	531.8	521.5	117.5°	177.7
537.0	536.1	525.8	522.4	513.7	507.7	500.0	488.8	469.9	458.8	442.4	120°	200.2
487.2	483.6	471.6	464.7	453.6	445.0	434.7	418.4	389.1	366.0	341.1	122.5°	223.8
440.7	430.4	416.6	406.3	392.6	380.6	368.6	343.6	297.2	259.4	225.0	125°	249.3
392.6	377.2	362.6	345.4	330.8	311.8	298.1	265.4	204.5	158.1	136.6	127.5°	271.8
343.6	322.1	305.9	282.7	266.3	240.6	225.9	186.4	133.9	113.4	106.4	130°	295.5
292.1	263.7	245.7	217.4	201.0	168.4	157.2	128.9	103.0	95.4	93.6	132.5°	319.0
237.2	202.7	183.0	152.0	140.9	121.1	112.6	98.8	86.8	83.4	85.1	135°	341.5
179.5	142.7	129.7	107.3	103.0	92.7	89.3	82.5	76.4	76.4	79.1	137.5°	362.2
128.0	99.6	96.2	82.5	81.7	76.4	73.9	70.4	68.7	70.4	73.9	140°	382.8
93.6	75.5	75.5	67.8	67.8	64.4	63.6	61.8	61.8	65.3	68.7	142.5°	404.3
73.9	61.8	63.6	57.5	58.4	55.9	56.8	55.9	56.8	59.3	61.8	145°	425.0
61.8	53.3	55.9	50.7	52.4	49.9	51.6	51.6	53.3	54.1	55.0	147.5°	443.7
55.0	49.0	50.7	47.3	49.0	46.4	49.0	49.0	49.9	49.9	49.9	150°	460.3
50.7	45.5	48.1	44.6	47.3	44.6	47.3	47.3	46.4	45.5	46.4	152.5°	477.0
48.1	44.6	47.3	43.7	46.4	43.7	45.5	44.6	43.0	43.0	43.0	155°	493.7
47.3	43.7	45.5	43.0	44.6	42.1	43.7	43.0	40.3	39.5	41.2	157.5°	507.5
47.3	43.0	45.5	42.1	43.7	41.2	43.0	40.3	37.8	37.8	40.3	160°	520.2
47.3	43.0	45.5	42.1	43.7	40.3	41.2	38.6	35.2	36.1	39.5	162.5°	530.0
48.1	44.6	46.4	43.0	43.7	38.6	40.3	36.9	34.3	35.2	37.8	165°	539.8
49.0	44.6	46.4	41.2	42.1	38.6	38.6	36.9	34.3	34.3	36.9	167.5°	547.7
49.0	43.7	44.6	40.3	41.2	36.9	37.8	36.1	33.5	32.7	34.3	170°	553.5
50.7	45.5	45.5	39.5	40.3	36.1	36.9	35.2	32.7	30.9	31.8	172.5°	556.5
52.4	46.4	47.3	41.2	41.2	36.9	37.8	34.3	30.9	29.3	30.0	175°	559.5
52.4	46.4	47.3	42.1	42.1	37.8	37.8	34.3	29.3	27.5	27.5	177.5°	563.3
49.9	45.5	46.4	42.1	42.1	37.8	37.8	33.5	28.4	25.8	25.0	180°	565.3
48.1	43.7	44.6	39.5	40.3	36.1	36.1	31.8	26.6	24.1	22.4		
43.7	40.3	40.3	36.9	36.1	31.8	31.8	29.3	25.0	21.5	19.8		
37.8	34.3	33.5	30.0	30.0	27.5	26.6	24.1	20.6	18.1	17.2		
30.9	26.6	26.6	22.4	22.4	19.8	20.6	18.1	15.5	14.6	13.7		
22.4	18.1	18.1	14.6	14.6	12.0	12.8	12.0	11.2	11.2	10.3		
13.7	9.4	10.3	7.7	9.4	6.8	7.7	6.8	6.8	6.0	6.0		
6.8	3.4	5.2	2.5	4.3	0.9	2.5	1.8	1.8	1.8	1.8		
0.9	0.0	0.9	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	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		
111.9	111.9	111.9	111.9	111.9	111.4	110.9	110.0	108.0	104.0	101.1		

'271443  
 ISC-AF-450-LED-E1-SL3-7027-ULG

REPORT NUMBER: P271443  
 CATALOG NUMBER: ISC-AF-45

**TION (continued):**

**CANDELA DISTRIBUTION (con**

117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°		175°	180°
133.5	133.5	133.5	133.5	132.9	132.5	131.5	129.5	126.6	123.7	0°	640.9	640.9
155.0	155.0	155.0	155.0	154.6	154.1	153.1	151.2	148.2	146.2	2.5°	582.6	585.1
177.4	177.1	176.9	176.7	176.4	176.2	175.7	173.7	170.8	168.8	5°	518.1	519.0
200.2	200.2	200.2	200.2	199.7	199.2	198.3	197.3	194.3	192.3	7.5°	439.9	438.1
223.8	223.8	223.8	223.8	223.6	223.3	222.8	221.8	218.8	216.9	10°	335.9	331.7
249.1	248.8	248.5	248.3	248.1	247.8	247.3	246.3	243.4	242.5	12.5°	216.5	210.5
272.1	272.4	272.6	272.8	272.4	271.8	270.9	269.0	267.0	265.0	15°	130.5	128.9
295.5	295.5	295.5	295.5	294.9	294.5	293.5	292.5	288.5	287.5	17.5°	104.8	104.8
319.0	319.0	319.0	319.0	318.2	317.6	316.0	315.0	312.1	311.2	20°	93.6	93.6
341.5	341.5	341.5	341.5	340.7	340.1	338.6	338.6	334.7	332.7	22.5°	86.8	86.8
362.2	362.2	362.2	362.2	361.7	361.2	360.2	360.2	357.3	356.3	25°	81.7	82.5
382.8	382.8	382.8	382.8	382.6	382.3	381.8	380.8	378.8	377.8	27.5°	77.3	77.3
404.3	404.3	404.3	404.3	403.9	403.4	402.4	402.4	399.5	400.5	30°	72.1	72.1
425.2	425.4	425.8	426.0	425.4	425.0	424.0	423.0	420.0	420.0	32.5°	63.6	63.6
444.1	444.6	445.1	445.6	445.4	445.1	444.6	443.7	439.7	438.7	35°	56.8	55.9
460.8	461.3	461.8	462.3	462.1	461.8	461.3	460.3	456.4	455.4	37.5°	50.7	51.6
477.2	477.4	477.8	478.0	477.8	477.4	477.0	476.0	473.0	474.0	40°	46.4	47.3
493.9	494.2	494.4	494.7	494.4	494.2	493.7	493.7	491.7	492.7	42.5°	44.6	44.6
507.9	508.4	508.9	509.4	509.4	509.4	509.4	509.4	506.5	507.5	45°	43.0	43.0
520.7	521.2	521.6	522.2	522.2	522.2	522.2	522.2	519.2	519.2	47.5°	43.0	43.0
530.4	531.0	531.4	532.0	531.8	531.4	531.0	531.0	528.0	529.0	50°	42.1	43.0
540.6	541.3	541.9	542.8	542.6	542.3	541.8	541.8	537.8	538.8	52.5°	41.2	41.2
548.1	548.7	549.1	549.7	549.7	549.7	549.7	550.6	547.7	548.7	55°	38.6	39.5
553.7	554.1	554.3	554.5	554.7	555.1	555.5	556.5	554.5	555.5	57.5°	36.1	36.9
556.9	557.5	557.9	558.5	558.3	557.9	557.5	558.5	556.5	558.5	60°	33.5	33.5
560.3	560.9	561.6	562.4	562.2	561.9	561.4	561.4	558.5	559.5	62.5°	30.0	30.0
564.1	564.9	565.6	566.3	566.3	566.3	566.3	567.3	563.3	564.3	65°	27.5	27.5
565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	565.3	67.5°	24.1	24.1
										70°	21.5	21.5
										72.5°	19.0	19.0
										75°	16.3	16.3
										77.5°	13.7	12.8
										80°	10.3	10.3
										82.5°	6.0	6.0
										85°	1.8	1.8
										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
										110°	100.1	99.2



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**CANDELA DISTRIBUTION (continued):**

	175°	180°
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

