

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: P226314

Luminaire Tested: **IST-AF-450-LED-E1-T2-7030-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226314
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35937)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: IST-AF-450-LED-E1-T2-7030-ULG
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II, WITH UPLIGHT GLOW
Light Source: (16) 3000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4513.8 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type II - Medium - Non-Cutoff
BUG Rating: B1 - U5 - G1

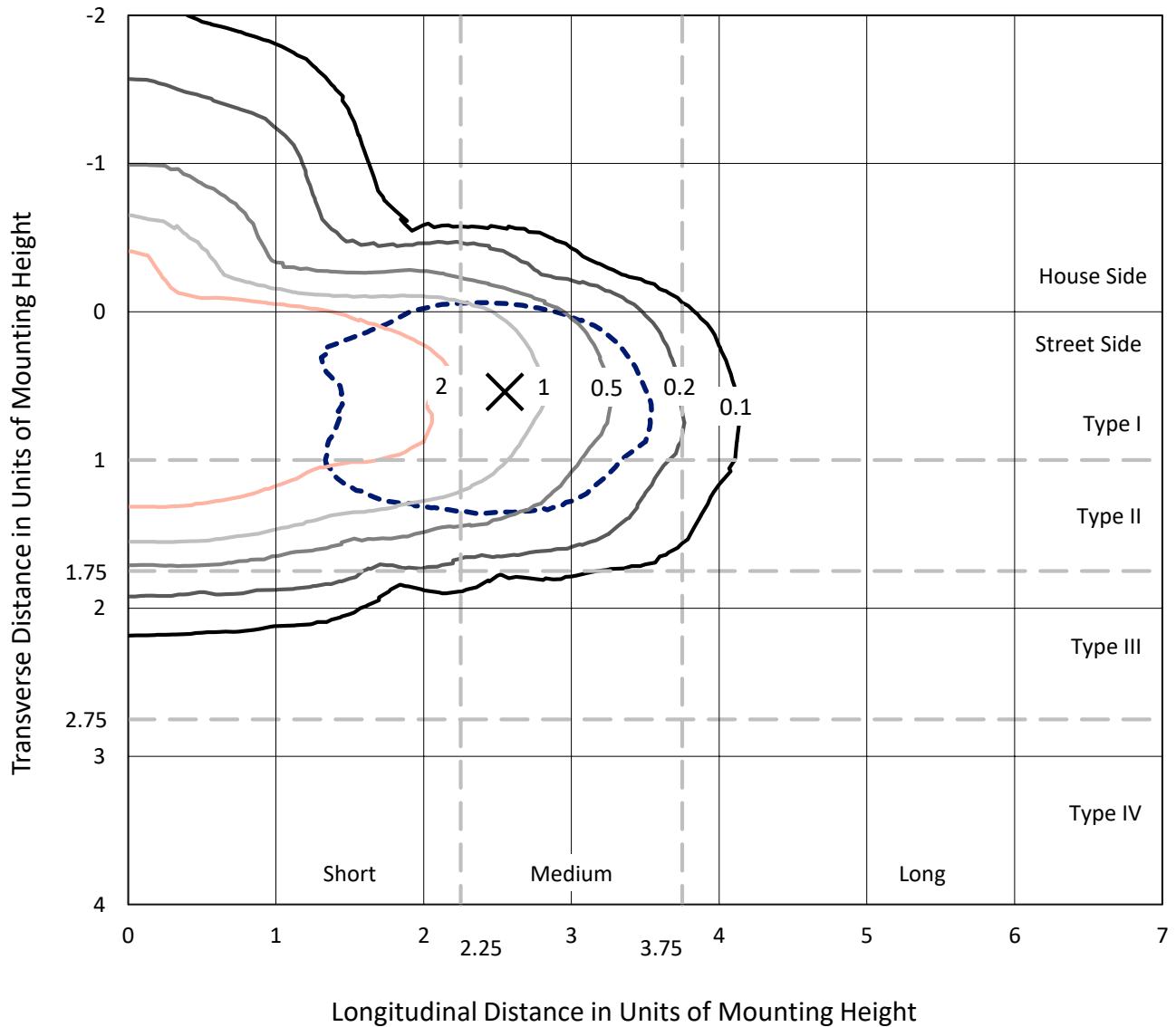
Input Watts (W): 42.01
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

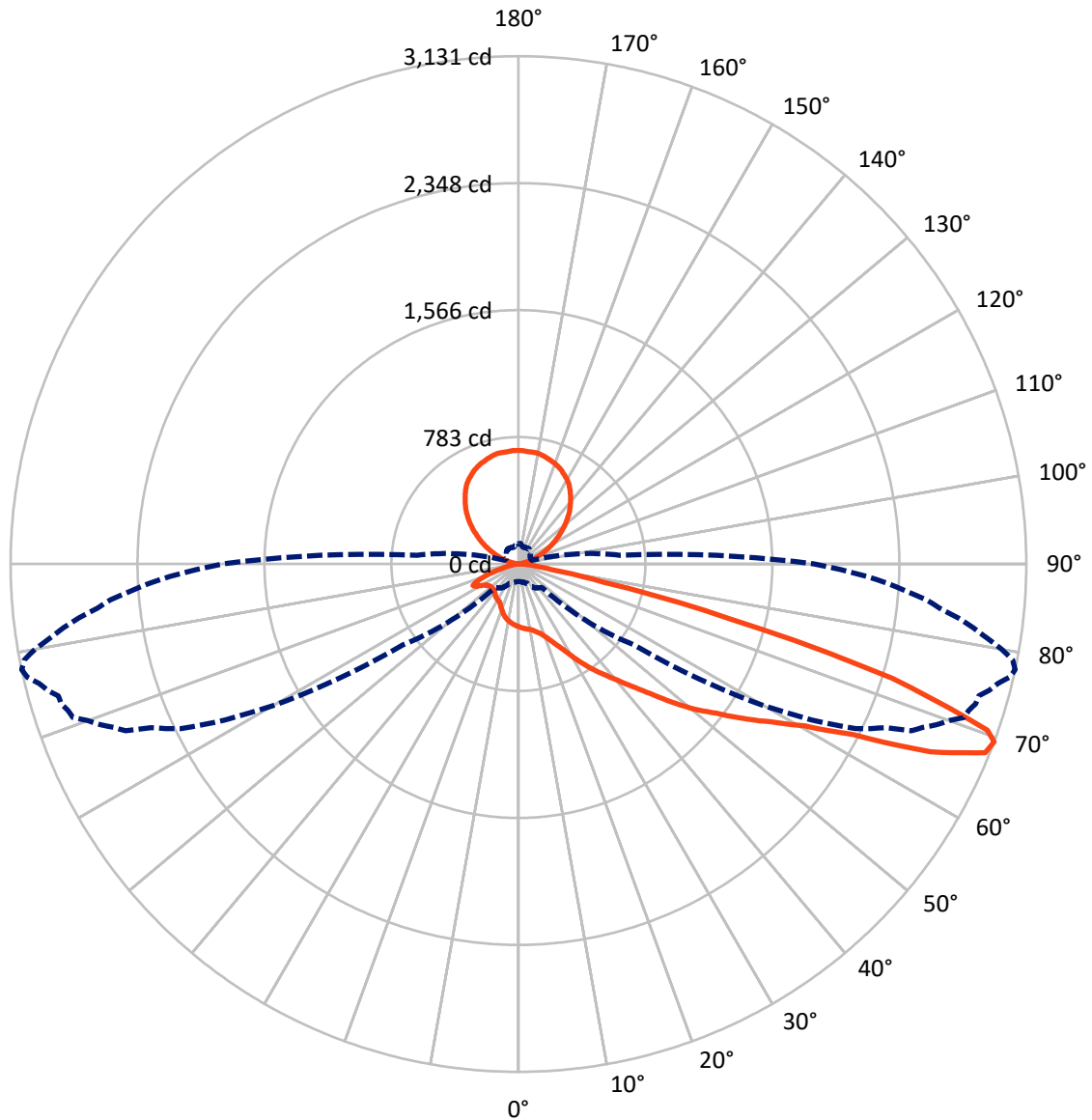
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.9 fc
 Type II - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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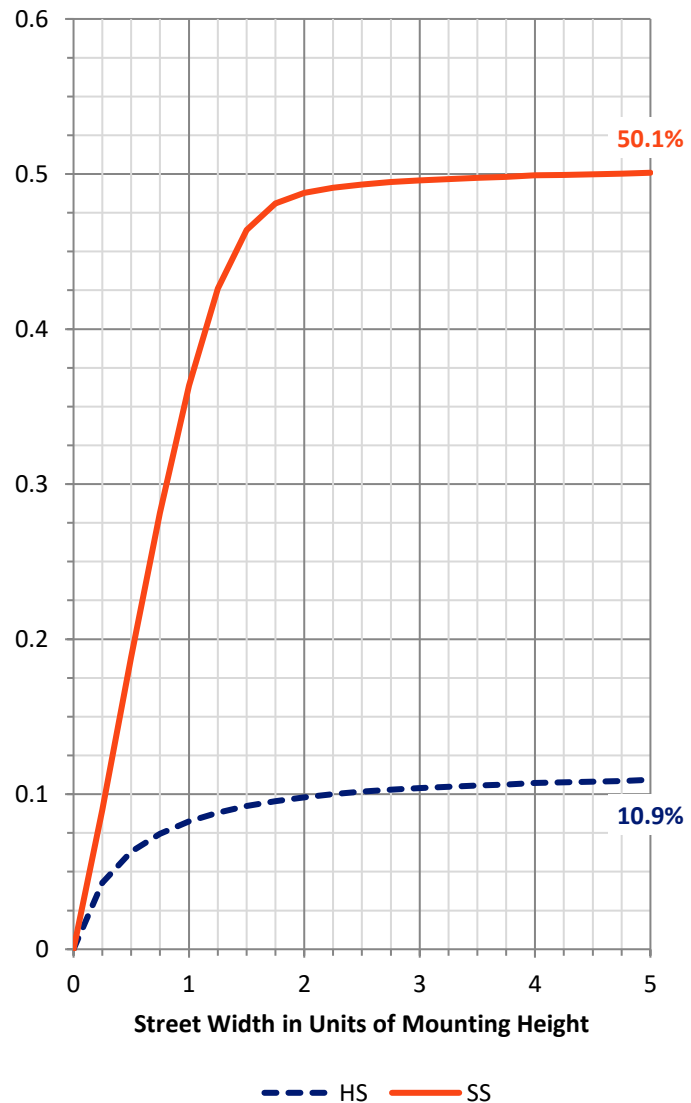
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	508.4	868.5	1376.9
	% Fixture	11.3	19.2	30.5
Street Side	Lumens	2268.9	868.0	3136.9
	% Fixture	50.3	19.2	69.5
Total	Lumens	2777.2	1736.6	4513.8
	% Fixture	61.5	38.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.9	0.8
10°-20°	108.3	2.4
20°-30°	194.2	4.3
30°-40°	317.0	7.0
40°-50°	468.8	10.4
50°-60°	612.2	13.6
60°-70°	684.6	15.2
70°-80°	307.4	6.8
80°-90°	49.0	1.1
90°-100°	10.7	0.2
100°-110°	57.4	1.3
110°-120°	166.1	3.7
120°-130°	273.2	6.1
130°-140°	336.8	7.5
140°-150°	344.6	7.6
150°-160°	290.3	6.4
160°-170°	191.2	4.2
170°-180°	66.3	1.5
0°-90°	2777.2	61.5
0°-180°	4513.8	100.0



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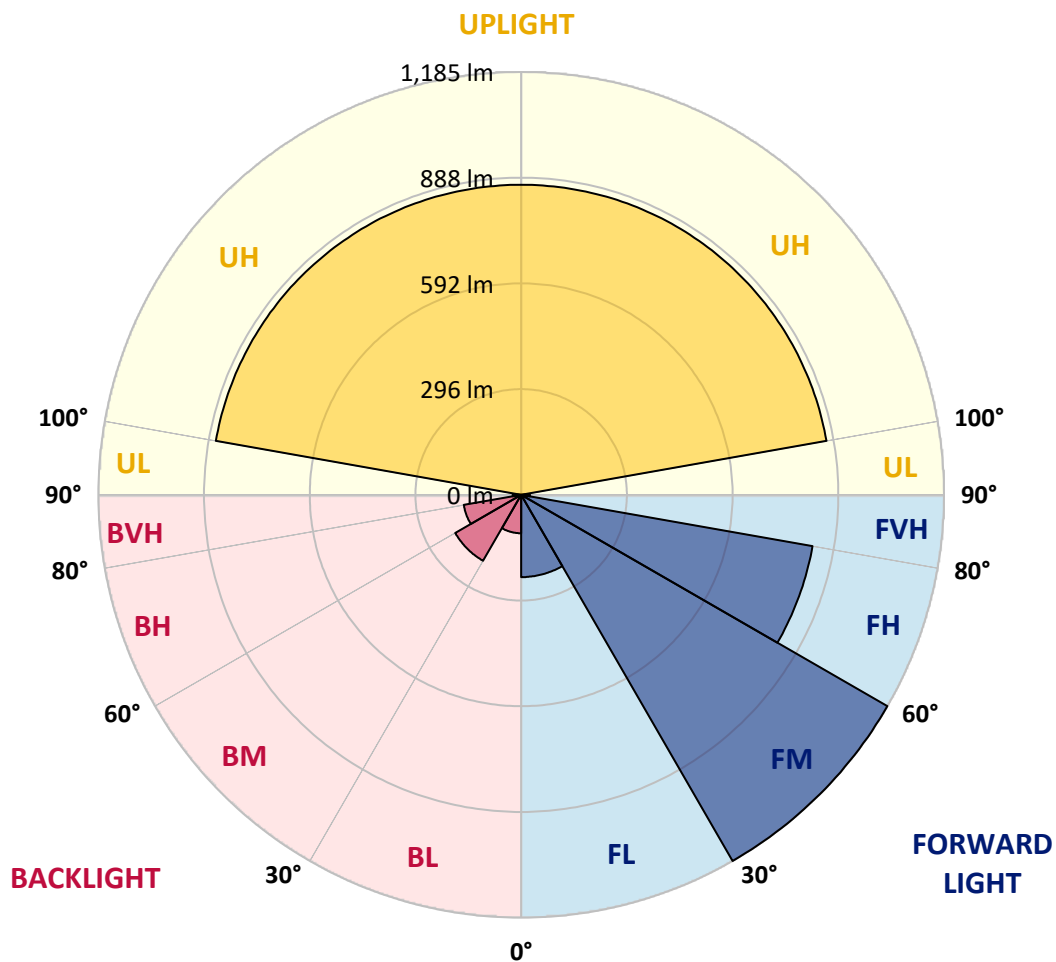
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	230.6	5.1			
FM	(30°-60°)	1184.6	26.2			
FH	(60°-80°)	828.8	18.4			G1/1800
FVH	(80°-90°)	25.0	0.6			G1/100
BL	(0°-30°)	107.8	2.4	B0/110		
BM	(30°-60°)	213.4	4.7	B0/220		
BH	(60°-80°)	163.2	3.6	B1/500		G1/500
BVH	(80°-90°)	24.0	0.5			G1/100
UL	(90°-100°)	10.7	0.2		U2/50	
UH	(100°-180°)	868.5	19.2		U4/1000	

BUG Rating: B1-U5-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3
2.5°	413.7	413.7	412.5	411.7	410.5	407.3	402.4	401.6	401.2	400.4	399.6
5°	444.0	440.7	441.5	439.5	435.1	429.4	420.6	416.1	413.7	413.3	411.7
7.5°	468.5	469.0	467.7	463.7	457.7	450.8	438.7	431.9	429.8	428.6	425.8
10°	486.3	485.1	484.3	483.5	478.6	473.0	457.7	449.2	447.6	444.4	441.1
12.5°	499.2	499.2	499.2	498.4	495.6	491.1	479.0	470.6	468.5	464.1	461.3
15°	513.3	511.7	510.1	508.9	509.3	509.3	500.4	494.0	490.7	488.3	482.7
17.5°	543.5	539.9	536.3	531.5	523.8	521.8	521.4	521.0	516.5	516.1	510.5
20°	569.4	566.1	562.9	558.1	547.2	535.5	541.5	547.2	546.4	546.8	544.0
22.5°	601.2	598.8	592.3	586.7	572.6	558.5	559.3	571.4	573.0	574.6	575.4
25°	644.8	643.6	633.1	622.2	606.1	592.7	580.2	595.2	598.4	602.0	609.3
27.5°	688.7	685.9	674.6	664.9	644.8	630.6	613.3	621.4	626.2	633.1	644.4
30°	745.6	737.9	733.9	712.1	693.6	673.0	658.1	660.5	659.7	667.7	685.1
32.5°	827.8	815.7	795.6	773.8	752.0	724.6	712.1	711.7	709.7	719.0	728.6
35°	872.2	869.4	856.9	835.1	811.3	785.5	777.4	769.8	771.0	775.8	779.4
37.5°	920.2	917.7	908.1	896.0	877.8	891.9	847.2	835.9	830.6	828.2	829.4
40°	941.1	943.1	948.4	950.4	939.9	1007.7	919.4	882.3	880.6	877.0	873.4
42.5°	945.6	950.8	961.3	984.3	994.4	1141.9	979.0	934.3	927.8	925.0	925.4
45°	961.7	969.8	971.8	992.7	1040.3	1148.8	1046.4	980.2	975.4	975.0	972.6
47.5°	1000.8	1011.7	1011.7	1021.0	1066.1	1162.1	1069.4	1026.2	1023.0	1021.4	1027.8
50°	1006.5	1021.0	1050.0	1079.8	1112.5	1173.0	1095.6	1076.2	1077.4	1081.1	1100.0
52.5°	910.9	925.4	1002.0	1089.9	1196.4	1202.8	1135.1	1142.7	1150.8	1168.6	1203.2
55°	781.1	791.5	882.3	1023.0	1199.6	1316.1	1234.3	1255.6	1272.6	1277.8	1332.3
57.5°	614.9	629.4	721.8	904.4	1120.2	1348.4	1462.5	1472.2	1453.2	1470.6	1490.3
60°	333.1	331.5	460.1	654.0	953.2	1288.7	1682.7	1848.8	1852.8	1879.4	1847.6
62.5°	186.3	186.3	223.4	335.9	613.3	1090.3	1788.3	2174.6	2225.0	2267.3	2360.5
65°	140.7	141.9	155.2	202.4	344.4	688.3	1710.9	2285.9	2382.7	2479.8	2643.2
67.5°	116.9	116.9	126.6	150.8	215.3	312.5	1259.7	2062.5	2183.5	2299.6	2525.4
69°	108.5	108.9	116.1	132.7	180.2	203.2	870.2	1748.8	1887.1	2048.0	2314.1
70°	104.4	103.2	110.1	123.8	163.3	160.5	637.5	1520.6	1627.8	1772.2	2078.2
72.5°	92.7	91.5	95.2	105.6	128.6	114.5	260.1	818.1	979.8	1141.5	1385.5
75°	82.7	81.5	84.3	89.1	100.0	87.5	130.6	342.7	414.9	536.3	739.9
77.5°	73.0	70.6	73.0	76.2	78.6	65.3	88.7	158.5	194.4	238.7	337.1
80°	66.1	63.7	66.5	64.9	61.7	50.4	58.9	92.3	102.4	122.6	160.5
82.5°	47.2	46.8	63.3	65.3	49.2	36.7	41.9	59.3	66.1	69.8	84.7
85°	29.0	27.8	36.7	46.8	50.0	23.0	27.0	35.1	36.7	39.9	47.2
87.5°	14.9	15.3	19.8	24.2	32.7	13.7	16.1	20.6	20.6	20.6	23.4
90°	8.6	9.4	13.0	16.5	14.9	10.6	13.0	12.8	13.8	13.2	14.4
92.5°	4.0	4.0	5.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
95°	5.0	5.0	6.0	7.0	7.0	7.0	7.0	7.5	7.6	7.7	7.9
97.5°	7.0	7.0	8.0	8.0	9.0	9.0	12.0	11.0	10.8	10.6	10.2
100°	8.0	8.0	9.0	10.0	12.0	21.0	29.0	27.5	27.2	26.9	26.3
102.5°	11.0	11.0	13.0	18.0	27.0	40.0	50.0	48.5	48.2	47.9	47.3
105°	21.0	22.0	27.0	36.0	48.0	63.0	72.0	71.0	70.8	70.6	70.2
107.5°	41.0	42.0	49.0	58.0	73.0	88.0	95.0	94.5	94.4	94.3	94.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
110°	66.0	68.0	74.0	87.0	102.0	114.0	120.0	120.5	120.6	120.7	120.9
112.5°	99.0	99.0	106.0	121.0	134.0	143.0	148.0	149.0	149.2	149.4	149.8
115°	140.0	139.0	147.0	159.0	168.0	174.0	179.0	180.5	180.8	181.1	181.7
117.5°	184.0	184.0	189.0	197.0	202.0	205.0	211.0	213.0	213.4	213.8	214.6
120°	225.0	223.0	226.0	233.0	237.0	243.0	246.0	248.0	248.4	248.8	249.6
122.5°	263.0	260.0	261.0	267.0	271.0	277.0	279.0	281.0	281.4	281.8	282.6
125°	298.0	294.0	296.0	299.0	305.0	310.0	313.0	314.0	314.2	314.4	314.8
127.5°	330.0	329.0	329.0	333.0	339.0	340.0	345.0	345.5	345.6	345.7	345.9
130°	363.0	361.0	362.0	366.0	370.0	372.0	377.0	379.0	379.4	379.8	380.6
132.5°	396.0	394.0	393.0	401.0	404.0	405.0	411.0	413.5	414.0	414.5	415.5
135°	429.0	426.0	426.0	432.0	435.0	437.0	443.0	445.5	446.0	446.5	447.5
137.5°	460.0	457.0	459.0	460.0	464.0	468.0	473.0	474.0	474.2	474.4	474.8
140°	488.0	485.0	487.0	489.0	491.0	497.0	500.0	501.0	501.2	501.4	501.8
142.5°	518.0	515.0	517.0	518.0	521.0	525.0	527.0	530.0	530.6	531.2	532.4
145°	550.0	546.0	544.0	547.0	550.0	551.0	556.0	559.0	559.6	560.2	561.4
147.5°	575.0	572.0	571.0	574.0	574.0	575.0	580.0	582.5	583.0	583.5	584.5
150°	595.0	592.0	593.0	593.0	593.0	593.0	597.0	598.5	598.8	599.1	599.7
152.5°	611.0	608.0	608.0	609.0	610.0	610.0	611.0	612.5	612.8	613.1	613.7
155°	629.0	625.0	625.0	627.0	630.0	628.0	626.0	628.5	629.0	629.5	630.5
157.5°	646.0	643.0	643.0	644.0	646.0	645.0	644.0	646.0	646.4	646.8	647.6
160°	663.0	660.0	659.0	656.0	655.0	655.0	658.0	661.0	661.6	662.2	663.4
162.5°	673.0	669.0	669.0	665.0	661.0	663.0	667.0	669.0	669.4	669.8	670.6
165°	681.0	678.0	676.0	676.0	673.0	673.0	672.0	674.5	675.0	675.5	676.5
167.5°	690.0	687.0	684.0	686.0	688.0	685.0	678.0	681.0	681.6	682.2	683.4
170°	698.0	695.0	692.0	692.0	693.0	691.0	686.0	687.5	687.8	688.1	688.7
172.5°	699.0	697.0	695.0	693.0	690.0	690.0	689.0	690.5	690.8	691.1	691.7
175°	700.0	698.0	697.0	695.0	691.0	690.0	690.0	692.5	693.0	693.5	694.5
177.5°	707.0	705.0	700.0	699.0	697.0	695.0	694.0	696.5	697.0	697.5	698.5
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0



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CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3
2.5°	400.0	398.8	397.2	397.6	396.8	395.6	396.0	395.6	396.0	395.2	394.4
5°	411.7	410.9	408.5	408.1	407.3	406.5	405.2	404.0	403.6	402.8	401.2
7.5°	425.0	422.6	421.4	419.8	417.7	414.5	414.1	412.5	411.3	410.5	408.5
10°	438.7	435.9	434.3	432.3	430.2	428.2	426.2	423.4	420.6	419.8	417.3
12.5°	459.3	455.6	452.4	449.2	447.2	443.5	440.7	437.1	434.3	433.1	429.0
15°	481.9	477.0	473.8	471.4	468.1	464.9	461.3	458.1	453.6	450.0	446.4
17.5°	508.5	504.0	501.6	497.2	493.1	489.5	486.7	482.7	479.0	472.6	469.4
20°	543.5	539.9	537.1	532.3	527.8	524.2	521.8	513.3	508.5	502.8	497.6
22.5°	576.2	576.6	573.8	570.6	567.7	562.9	558.9	552.8	546.8	539.9	532.7
25°	611.7	614.9	615.3	614.5	612.9	607.3	605.2	599.2	594.4	583.1	579.8
27.5°	651.2	654.8	659.3	664.9	666.1	660.1	662.9	656.9	648.4	643.6	633.1
30°	689.5	699.6	708.9	715.3	719.4	722.2	720.2	718.1	712.5	704.4	695.2
32.5°	738.7	749.2	758.5	772.6	779.8	788.7	787.1	787.9	785.9	777.8	766.9
35°	788.3	797.6	809.7	819.0	836.7	846.4	854.4	854.0	854.0	849.2	838.7
37.5°	832.3	837.5	847.6	862.9	874.6	889.9	902.8	908.1	916.5	916.9	905.6
40°	878.2	883.5	891.1	902.4	915.3	933.5	950.8	967.7	975.8	984.3	979.8
42.5°	927.8	933.5	939.1	946.4	964.9	979.0	1002.4	1025.4	1041.9	1059.3	1057.3
45°	977.0	983.5	991.5	1002.4	1019.0	1041.9	1064.5	1090.3	1128.2	1148.8	1162.9
47.5°	1032.7	1043.1	1058.1	1075.4	1088.7	1112.5	1141.1	1181.1	1219.4	1254.8	1277.0
50°	1116.5	1120.6	1144.8	1161.7	1187.1	1211.3	1239.9	1275.0	1324.6	1360.9	1396.4
52.5°	1215.3	1230.6	1254.8	1274.2	1294.4	1318.6	1348.0	1379.4	1428.6	1469.4	1515.3
55°	1342.7	1364.5	1385.5	1396.0	1424.2	1446.0	1469.8	1500.8	1553.6	1598.0	1652.0
57.5°	1494.8	1516.5	1526.6	1541.9	1554.0	1578.2	1610.5	1631.5	1678.2	1724.2	1781.5
60°	1806.9	1793.2	1805.2	1781.5	1777.8	1779.8	1786.7	1802.8	1829.0	1871.8	1932.3
62.5°	2370.2	2350.4	2298.0	2279.0	2242.3	2192.7	2146.0	2139.5	2125.8	2158.1	2196.0
65°	2699.2	2771.0	2778.6	2798.8	2784.3	2745.6	2690.7	2673.0	2628.6	2597.6	2595.6
67.5°	2620.2	2727.8	2795.2	2880.3	2927.4	2973.4	2985.5	3001.2	2972.6	2958.5	2962.5
69°	2400.4	2480.2	2631.1	2689.1	2763.7	2825.0	2905.7	2919.8	2947.6	2951.6	3005.3
70°	2182.7	2300.0	2386.3	2473.4	2576.6	2644.0	2680.2	2739.9	2808.9	2842.8	2900.8
72.5°	1569.4	1607.7	1669.0	1781.9	1810.5	1880.2	1951.6	2002.4	2083.5	2140.7	2277.4
75°	846.8	869.8	966.1	1030.2	1047.2	1070.2	1122.6	1135.1	1165.3	1183.9	1315.3
77.5°	386.7	421.8	434.3	469.4	449.6	459.3	471.8	469.0	477.4	517.7	563.7
80°	178.2	185.1	189.9	204.4	205.2	202.0	203.2	201.2	199.6	206.0	210.9
82.5°	86.7	97.2	97.2	106.0	110.5	109.3	111.7	110.9	112.5	110.9	116.1
85°	50.8	50.8	54.8	59.7	58.9	60.5	60.5	63.7	64.1	64.9	64.9
87.5°	23.8	26.2	27.4	29.4	30.2	31.5	32.3	32.3	32.7	31.9	32.7
90°	15.0	15.0	19.1	19.1	19.9	21.1	19.5	20.3	23.1	19.5	22.3
92.5°	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0
95°	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0
97.5°	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0
100°	26.0	25.7	25.4	25.1	24.8	24.5	24.2	23.9	23.6	23.3	23.0
102.5°	47.0	46.5	46.0	45.5	45.0	44.5	44.0	43.5	43.0	42.5	42.0
105°	70.0	69.5	69.0	68.5	68.0	67.5	67.0	66.5	66.0	65.5	65.0
107.5°	94.0	93.6	93.2	92.8	92.4	92.0	91.6	91.2	90.8	90.4	90.0



REPORT NUMBER: P226314

CATALOG NUMBER: IST-AF-450-LED-E1-T2-7030-ULG

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
110°	121.0	120.8	120.6	120.4	120.2	120.0	119.8	119.6	119.4	119.2	119.0
112.5°	150.0	149.9	149.8	149.7	149.6	149.5	149.4	149.3	149.2	149.1	149.0
115°	182.0	181.7	181.4	181.1	180.8	180.5	180.2	179.9	179.6	179.3	179.0
117.5°	215.0	214.5	214.0	213.5	213.0	212.5	212.0	211.5	211.0	210.5	210.0
120°	250.0	249.5	249.0	248.5	248.0	247.5	247.0	246.5	246.0	245.5	245.0
122.5°	283.0	282.5	282.0	281.5	281.0	280.5	280.0	279.5	279.0	278.5	278.0
125°	315.0	314.5	314.0	313.5	313.0	312.5	312.0	311.5	311.0	310.5	310.0
127.5°	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0
130°	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0
132.5°	416.0	415.8	415.6	415.4	415.2	415.0	414.8	414.6	414.4	414.2	414.0
135°	448.0	447.9	447.8	447.7	447.6	447.5	447.4	447.3	447.2	447.1	447.0
137.5°	475.0	475.1	475.2	475.3	475.4	475.5	475.6	475.7	475.8	475.9	476.0
140°	502.0	502.2	502.4	502.6	502.8	503.0	503.2	503.4	503.6	503.8	504.0
142.5°	533.0	533.0	533.0	533.0	533.0	533.0	533.0	533.0	533.0	533.0	533.0
145°	562.0	561.9	561.8	561.7	561.6	561.5	561.4	561.3	561.2	561.1	561.0
147.5°	585.0	585.1	585.2	585.3	585.4	585.5	585.6	585.7	585.8	585.9	586.0
150°	600.0	600.3	600.6	600.9	601.2	601.5	601.8	602.1	602.4	602.7	603.0
152.5°	614.0	614.4	614.8	615.2	615.6	616.0	616.4	616.8	617.2	617.6	618.0
155°	631.0	631.5	632.0	632.5	633.0	633.5	634.0	634.5	635.0	635.5	636.0
157.5°	648.0	648.2	648.4	648.6	648.8	649.0	649.2	649.4	649.6	649.8	650.0
160°	664.0	663.7	663.4	663.1	662.8	662.5	662.2	661.9	661.6	661.3	661.0
162.5°	671.0	670.9	670.8	670.7	670.6	670.5	670.4	670.3	670.2	670.1	670.0
165°	677.0	677.3	677.6	677.9	678.2	678.5	678.8	679.1	679.4	679.7	680.0
167.5°	684.0	684.4	684.8	685.2	685.6	686.0	686.4	686.8	687.2	687.6	688.0
170°	689.0	689.5	690.0	690.5	691.0	691.5	692.0	692.5	693.0	693.5	694.0
172.5°	692.0	692.2	692.4	692.6	692.8	693.0	693.2	693.4	693.6	693.8	694.0
175°	695.0	695.1	695.2	695.3	695.4	695.5	695.6	695.7	695.8	695.9	696.0
177.5°	699.0	699.2	699.4	699.6	699.8	700.0	700.2	700.4	700.6	700.8	701.0
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0



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CATALOG NUMBER: IST-AF-450-LED-E1-T2-7030-ULG

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3
2.5°	393.5	394.4	394.0	392.3	391.9	391.9	391.1	390.7	389.9	389.5	390.3
5°	400.8	400.8	399.6	398.0	396.4	396.0	395.6	393.5	392.7	391.9	391.1
7.5°	407.7	406.9	405.2	402.4	400.8	400.4	398.8	396.8	394.8	393.1	392.3
10°	414.9	414.1	410.9	408.9	405.6	405.2	402.4	400.0	398.0	396.0	394.4
12.5°	425.4	424.6	421.0	416.1	413.7	412.1	408.5	405.6	402.8	400.4	397.6
15°	441.5	438.3	435.9	431.0	427.4	424.2	419.8	415.7	411.7	407.7	405.2
17.5°	464.1	459.7	453.2	450.4	445.6	440.3	434.3	431.5	426.2	421.4	416.5
20°	493.5	489.1	479.0	475.4	468.5	460.9	456.0	450.0	445.6	437.9	432.7
22.5°	526.2	522.2	512.5	502.8	496.4	490.3	482.7	475.0	466.5	459.3	453.6
25°	568.6	562.5	554.0	544.4	534.7	526.2	515.7	504.8	497.6	487.5	479.4
27.5°	626.2	615.7	601.6	591.1	583.5	570.6	557.7	548.0	536.7	523.4	514.5
30°	688.7	677.0	666.5	654.4	641.5	629.0	611.3	597.2	585.1	571.0	556.5
32.5°	758.1	748.0	733.1	717.3	703.2	687.5	674.6	659.7	638.7	623.8	608.5
35°	827.8	816.1	800.8	787.5	771.4	755.2	740.7	721.0	702.0	680.6	659.3
37.5°	895.2	885.1	868.1	848.0	833.9	816.5	801.6	780.6	758.1	734.3	718.1
40°	970.2	954.0	942.3	919.0	904.4	885.1	863.7	847.6	825.8	800.0	777.0
42.5°	1056.1	1044.8	1032.3	1013.3	998.0	975.0	948.0	927.4	907.3	876.6	844.8
45°	1164.9	1157.7	1137.1	1121.8	1101.2	1077.0	1053.6	1028.6	996.8	961.3	932.3
47.5°	1295.6	1289.9	1271.4	1249.6	1222.6	1189.9	1168.1	1133.9	1106.9	1062.5	1027.8
50°	1414.1	1416.9	1406.9	1373.4	1349.2	1316.5	1282.3	1252.4	1210.9	1164.9	1120.6
52.5°	1555.6	1552.8	1527.4	1508.9	1480.2	1440.7	1403.2	1364.9	1319.4	1271.8	1216.5
55°	1691.1	1699.6	1681.9	1655.6	1621.0	1565.7	1527.8	1478.2	1430.2	1377.8	1314.1
57.5°	1822.6	1849.6	1835.9	1804.8	1769.4	1729.4	1679.4	1623.8	1574.2	1505.6	1433.9
60°	1986.3	2022.2	2027.8	2007.7	1969.0	1922.6	1856.9	1813.3	1745.2	1681.9	1626.6
62.5°	2238.3	2319.8	2314.9	2324.6	2297.2	2268.6	2191.5	2144.8	2056.1	2010.5	1933.5
65°	2659.3	2719.4	2791.5	2789.1	2770.2	2701.6	2621.8	2543.6	2485.1	2395.2	2314.9
67.5°	3012.5	3062.1	3104.8	3082.7	3039.1	2962.1	2868.6	2759.7	2670.6	2571.4	2466.1
69°	3045.6	3106.1	3131.1	3103.6	3025.4	2925.0	2833.5	2732.3	2609.7	2524.6	2396.4
70°	2956.9	3016.5	3066.9	2996.4	2924.6	2826.6	2726.6	2621.4	2511.7	2420.2	2290.7
72.5°	2348.8	2416.1	2409.3	2401.6	2344.4	2246.4	2154.4	2098.0	2021.0	1910.5	1816.9
75°	1365.7	1396.8	1342.3	1399.6	1331.1	1232.3	1245.2	1181.5	1125.0	1061.3	1012.1
77.5°	536.3	563.7	535.1	525.8	495.2	488.3	437.1	443.1	417.7	367.7	344.8
80°	203.2	206.9	202.0	191.9	189.9	178.2	175.0	163.7	158.5	141.9	135.9
82.5°	109.3	111.3	108.1	104.8	102.4	95.6	91.1	82.7	77.8	72.6	72.2
85°	62.9	61.3	59.7	58.1	54.4	50.4	47.2	44.0	40.3	37.5	34.7
87.5°	33.1	33.5	33.9	32.3	29.8	26.6	24.6	23.4	20.6	19.4	18.1
90°	19.7	16.7	17.7	19.9	18.9	16.7	16.1	14.7	13.2	13.0	11.8
92.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
95°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0
100°	22.6	22.2	21.8	21.4	21.0	20.6	20.2	19.8	19.4	19.0	19.0
102.5°	41.7	41.4	41.1	40.8	40.5	40.2	39.9	39.6	39.3	39.0	38.8
105°	64.6	64.2	63.8	63.4	63.0	62.6	62.2	61.8	61.4	61.0	61.0
107.5°	89.7	89.4	89.1	88.8	88.5	88.2	87.9	87.6	87.3	87.0	86.8



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°	
110°	118.7	118.4	118.1	117.8	117.5	117.2	116.9	116.6	116.3	116.0	116.2	0°
112.5°	148.8	148.6	148.4	148.2	148.0	147.8	147.6	147.4	147.2	147.0	147.0	2.5°
115°	178.8	178.6	178.4	178.2	178.0	177.8	177.6	177.4	177.2	177.0	177.2	5°
117.5°	209.8	209.6	209.4	209.2	209.0	208.8	208.6	208.4	208.2	208.0	208.2	7.5°
120°	244.8	244.6	244.4	244.2	244.0	243.8	243.6	243.4	243.2	243.0	243.0	10°
122.5°	277.8	277.6	277.4	277.2	277.0	276.8	276.6	276.4	276.2	276.0	276.2	12.5°
125°	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	15°
127.5°	345.9	345.8	345.7	345.6	345.5	345.4	345.3	345.2	345.1	345.0	345.4	17.5°
130°	380.8	380.6	380.4	380.2	380.0	379.8	379.6	379.4	379.2	379.0	379.2	20°
132.5°	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.2	22.5°
135°	447.3	447.6	447.9	448.2	448.5	448.8	449.1	449.4	449.7	450.0	450.2	25°
137.5°	476.5	477.0	477.5	478.0	478.5	479.0	479.5	480.0	480.5	481.0	481.2	27.5°
140°	504.5	505.0	505.5	506.0	506.5	507.0	507.5	508.0	508.5	509.0	509.4	30°
142.5°	533.1	533.2	533.3	533.4	533.5	533.6	533.7	533.8	533.9	534.0	534.4	32.5°
145°	560.7	560.4	560.1	559.8	559.5	559.2	558.9	558.6	558.3	558.0	558.4	35°
147.5°	585.7	585.4	585.1	584.8	584.5	584.2	583.9	583.6	583.3	583.0	583.4	37.5°
150°	603.3	603.6	603.9	604.2	604.5	604.8	605.1	605.4	605.7	606.0	606.8	40°
152.5°	618.5	619.0	619.5	620.0	620.5	621.0	621.5	622.0	622.5	623.0	624.0	42.5°
155°	636.2	636.4	636.6	636.8	637.0	637.2	637.4	637.6	637.8	638.0	638.6	45°
157.5°	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	651.0	47.5°
160°	660.9	660.8	660.7	660.6	660.5	660.4	660.3	660.2	660.1	660.0	661.2	50°
162.5°	669.8	669.6	669.4	669.2	669.0	668.8	668.6	668.4	668.2	668.0	669.2	52.5°
165°	679.8	679.6	679.4	679.2	679.0	678.8	678.6	678.4	678.2	678.0	678.8	55°
167.5°	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	689.2	57.5°
170°	694.2	694.4	694.6	694.8	695.0	695.2	695.4	695.6	695.8	696.0	697.0	60°
172.5°	694.2	694.4	694.6	694.8	695.0	695.2	695.4	695.6	695.8	696.0	697.0	62.5°
175°	695.8	695.6	695.4	695.2	695.0	694.8	694.6	694.4	694.2	694.0	695.0	65°
177.5°	700.7	700.4	700.1	699.8	699.5	699.2	698.9	698.6	698.3	698.0	698.8	67.5°
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	69°
												70°
												72.5°
												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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 NUMBER: IST-AF-450-LED-E1-T2-7030-ULG

REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°	110°	87°
386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	386.3	110°	116.4
389.1	389.1	387.9	387.1	384.3	379.4	374.6	370.2	364.1	361.7	358.5	112.5°	147.0
390.3	389.5	388.3	386.7	381.0	369.8	358.1	345.6	332.7	321.0	307.3	115°	177.4
391.1	389.5	387.9	385.9	377.8	360.5	337.1	312.5	289.5	272.2	264.9	117.5°	208.4
391.5	390.3	388.3	385.5	374.2	348.4	310.9	275.4	255.2	248.4	247.2	120°	243.0
396.0	394.0	390.7	387.5	372.6	335.1	281.5	247.6	239.5	242.7	248.4	122.5°	276.4
401.6	399.2	395.2	391.9	371.8	317.7	252.8	231.9	234.7	243.5	252.8	125°	310.0
411.7	407.7	403.2	400.0	373.4	296.4	229.8	223.8	232.3	243.5	256.0	127.5°	345.8
426.6	421.0	415.7	410.1	375.8	269.8	216.1	218.5	228.6	240.7	254.4	130°	379.4
445.2	438.7	431.5	423.0	378.6	246.8	208.5	212.9	222.2	232.7	244.0	132.5°	414.4
470.2	461.3	452.0	441.5	382.7	221.8	201.6	206.5	212.1	218.1	223.8	135°	450.4
501.6	489.5	479.4	465.3	386.7	204.8	196.0	197.6	198.8	199.6	199.2	137.5°	481.4
543.5	525.0	513.3	496.0	391.1	196.0	189.5	187.5	185.5	182.7	179.4	140°	509.8
587.9	572.6	554.0	531.9	394.0	189.9	183.5	177.0	171.4	168.5	168.5	142.5°	534.8
639.5	620.6	597.2	569.4	390.3	183.5	175.4	166.9	163.7	167.3	166.1	145°	558.8
691.1	664.9	639.1	607.3	381.5	176.2	166.5	162.1	164.5	159.7	156.9	147.5°	583.8
748.0	719.0	683.1	646.0	368.5	168.5	162.1	164.5	156.0	150.4	152.8	150°	607.6
811.7	777.4	738.7	688.3	360.1	163.7	155.2	157.3	150.0	146.0	144.8	152.5°	625.0
898.4	849.6	802.4	743.1	366.5	156.0	141.9	150.0	146.0	142.3	139.1	155°	639.2
983.5	931.5	875.8	806.1	377.8	150.4	131.5	142.3	145.2	139.1	133.1	157.5°	652.0
1069.0	1013.7	948.8	871.0	391.5	146.8	123.4	133.1	143.1	135.9	131.0	160°	662.4
1158.9	1089.1	1022.6	938.7	409.3	143.1	116.9	125.0	139.5	135.9	128.6	162.5°	670.4
1253.2	1171.0	1104.4	1013.7	440.3	137.9	108.9	118.5	135.9	135.5	126.2	165°	679.6
1362.9	1289.5	1204.0	1111.7	483.5	131.9	101.6	113.7	132.7	133.9	123.4	167.5°	690.4
1549.6	1473.8	1370.6	1282.7	569.0	123.8	97.2	108.9	127.4	130.6	121.0	170°	698.0
1852.4	1749.2	1654.4	1572.2	715.3	112.5	94.0	103.6	121.8	126.6	119.0	172.5°	698.0
2199.6	2098.8	1984.3	1846.0	796.8	102.0	89.5	97.2	116.1	122.6	116.9	175°	696.0
2347.2	2215.3	2076.2	1912.1	719.0	93.5	84.7	91.1	109.7	116.9	114.1	177.5°	699.6
2279.4	2146.0	1984.3	1823.4	625.4	89.1	81.9	87.9	104.8	113.3	111.3	180°	700.0
2161.7	2027.4	1883.1	1689.9	558.5	86.7	79.8	85.9	102.8	111.3	109.7		
1709.7	1589.9	1456.9	1309.7	380.6	78.6	73.4	79.8	94.8	104.0	103.6		
906.1	871.0	772.6	686.3	197.2	70.2	66.5	73.0	87.5	97.2	97.2		
326.2	296.0	283.1	235.1	104.8	61.3	59.7	64.5	79.4	88.7	88.3		
123.4	120.2	107.7	100.8	66.5	50.0	50.4	55.2	69.8	78.6	78.2		
69.8	63.3	61.3	59.3	42.3	39.5	41.5	46.4	59.7	67.3	68.5		
33.5	31.0	30.2	28.2	27.8	30.2	32.7	36.7	47.6	56.9	55.6		
16.1	15.3	14.9	14.5	19.8	19.4	23.8	25.4	31.9	45.2	40.7		
12.2	12.2	11.8	11.0	12.6	15.5	16.7	17.9	20.3	34.2	29.4		
6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	6.0	6.0	6.0		
7.0	7.0	7.0	7.0	7.0	7.0	8.0	7.0	7.0	7.0	7.0		
8.0	8.0	8.0	8.0	8.0	9.0	10.0	12.0	9.0	9.0	8.0		
19.0	19.0	19.0	19.0	19.0	23.0	26.0	29.0	21.0	12.0	10.0		
38.6	38.4	38.2	38.0	39.0	42.0	47.0	50.0	40.0	27.0	18.0		
61.0	61.0	61.0	61.0	61.0	65.0	70.0	72.0	63.0	48.0	36.0		
86.6	86.4	86.2	86.0	87.0	90.0	94.0	95.0	88.0	73.0	58.0		

'226314
 IST-AF-450-LED-E1-T2-7030-ULG

REPORT NUMBER: P226314
 CATALOG NUMBER: IST-AF-450

TION (continued):

CANDELA DISTRIBUTION (con

88°	89°	90°	95°	105°	115°	125°	135°	145°	155°		165°	175°
116.6	116.8	117.0	116.0	119.0	121.0	120.0	114.0	102.0	87.0	0°	386.3	386.3
147.0	147.0	147.0	147.0	149.0	150.0	148.0	143.0	134.0	121.0	2.5°	355.6	350.0
177.6	177.8	178.0	177.0	179.0	182.0	179.0	174.0	168.0	159.0	5°	297.2	296.4
208.6	208.8	209.0	208.0	210.0	215.0	211.0	205.0	202.0	197.0	7.5°	260.5	255.2
243.0	243.0	243.0	243.0	245.0	250.0	246.0	243.0	237.0	233.0	10°	248.4	248.0
276.6	276.8	277.0	276.0	278.0	283.0	279.0	277.0	271.0	267.0	12.5°	253.6	254.8
310.0	310.0	310.0	310.0	310.0	315.0	313.0	310.0	305.0	299.0	15°	260.5	262.9
346.2	346.6	347.0	345.0	346.0	346.0	345.0	340.0	339.0	333.0	17.5°	264.9	269.4
379.6	379.8	380.0	379.0	381.0	381.0	377.0	372.0	370.0	366.0	20°	263.7	269.0
414.6	414.8	415.0	414.0	414.0	416.0	411.0	405.0	404.0	401.0	22.5°	250.4	252.8
450.6	450.8	451.0	450.0	447.0	448.0	443.0	437.0	435.0	432.0	25°	226.6	227.4
481.6	481.8	482.0	481.0	476.0	475.0	473.0	468.0	464.0	460.0	27.5°	198.0	197.2
510.2	510.6	511.0	509.0	504.0	502.0	500.0	497.0	491.0	489.0	30°	177.8	172.6
535.2	535.6	536.0	534.0	533.0	533.0	527.0	525.0	521.0	518.0	32.5°	168.5	165.3
559.2	559.6	560.0	558.0	561.0	562.0	556.0	551.0	550.0	547.0	35°	162.1	156.9
584.2	584.6	585.0	583.0	586.0	585.0	580.0	575.0	574.0	574.0	37.5°	168.1	167.7
608.4	609.2	610.0	606.0	603.0	600.0	597.0	593.0	593.0	593.0	40°	173.8	173.0
626.0	627.0	628.0	623.0	618.0	614.0	611.0	610.0	610.0	609.0	42.5°	164.1	156.9
639.8	640.4	641.0	638.0	636.0	631.0	626.0	628.0	630.0	627.0	45°	146.4	137.9
653.0	654.0	655.0	650.0	650.0	648.0	644.0	645.0	646.0	644.0	47.5°	134.3	129.4
663.6	664.8	666.0	660.0	661.0	664.0	658.0	655.0	655.0	656.0	50°	128.6	127.0
671.6	672.8	674.0	668.0	670.0	671.0	667.0	663.0	661.0	665.0	52.5°	127.0	131.0
680.4	681.2	682.0	678.0	680.0	677.0	672.0	673.0	673.0	676.0	55°	126.2	130.6
691.6	692.8	694.0	688.0	688.0	684.0	678.0	685.0	688.0	686.0	57.5°	120.6	128.2
699.0	700.0	701.0	696.0	694.0	689.0	686.0	691.0	693.0	692.0	60°	116.5	125.8
699.0	700.0	701.0	696.0	694.0	692.0	689.0	690.0	690.0	693.0	62.5°	114.1	124.6
697.0	698.0	699.0	694.0	696.0	695.0	690.0	690.0	691.0	695.0	65°	112.1	125.4
700.4	701.2	702.0	698.0	701.0	699.0	694.0	695.0	697.0	699.0	67.5°	108.9	127.8
700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	69°	107.3	127.4
										70°	105.6	126.2
										72.5°	100.0	116.5
										75°	93.1	102.8
										77.5°	84.3	88.3
										80°	74.6	77.0
										82.5°	64.9	74.2
										85°	50.8	62.9
										87.5°	37.5	34.7
										90°	28.4	20.7
										92.5°	5.0	4.0
										95°	6.0	5.0
										97.5°	8.0	7.0
										100°	9.0	8.0
										102.5°	13.0	11.0
										105°	27.0	22.0
										107.5°	49.0	42.0



REPORT NUMBER: P226314

CATALOG NUMBER: IST-AF-450-LED-E1-1

0-LED-E1-T2-7030-ULG

tinued):

180°
386.3
351.2
294.0
255.6
249.2
254.0
263.7
271.0
270.2
254.8
228.2
200.4
176.6
169.0
159.3
169.8
174.6
158.5
137.9
128.6
126.2
132.3
130.2
128.6
126.2
124.2
123.8
124.6
123.0
121.0
108.9
98.0
88.3
77.8
65.7
49.2
37.5
18.3
4.0
5.0
7.0
8.0
11.0
21.0
41.0

CANDELA DISTRIBUTION (continued):

	165°	175°	180°
110°	74.0	68.0	66.0
112.5°	106.0	99.0	99.0
115°	147.0	139.0	140.0
117.5°	189.0	184.0	184.0
120°	226.0	223.0	225.0
122.5°	261.0	260.0	263.0
125°	296.0	294.0	298.0
127.5°	329.0	329.0	330.0
130°	362.0	361.0	363.0
132.5°	393.0	394.0	396.0
135°	426.0	426.0	429.0
137.5°	459.0	457.0	460.0
140°	487.0	485.0	488.0
142.5°	517.0	515.0	518.0
145°	544.0	546.0	550.0
147.5°	571.0	572.0	575.0
150°	593.0	592.0	595.0
152.5°	608.0	608.0	611.0
155°	625.0	625.0	629.0
157.5°	643.0	643.0	646.0
160°	659.0	660.0	663.0
162.5°	669.0	669.0	673.0
165°	676.0	678.0	681.0
167.5°	684.0	687.0	690.0
170°	692.0	695.0	698.0
172.5°	695.0	697.0	699.0
175°	697.0	698.0	700.0
177.5°	700.0	705.0	707.0
180°	700.0	700.0	700.0

(END OF F

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

Scaled Data Report

