

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: P271702

Luminaire Tested: **IST-AF-450-LED-E1-SL2-7027-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P271702  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35945)-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-SL2-7027-ULG  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II 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: 4337.6 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type II - Short - 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

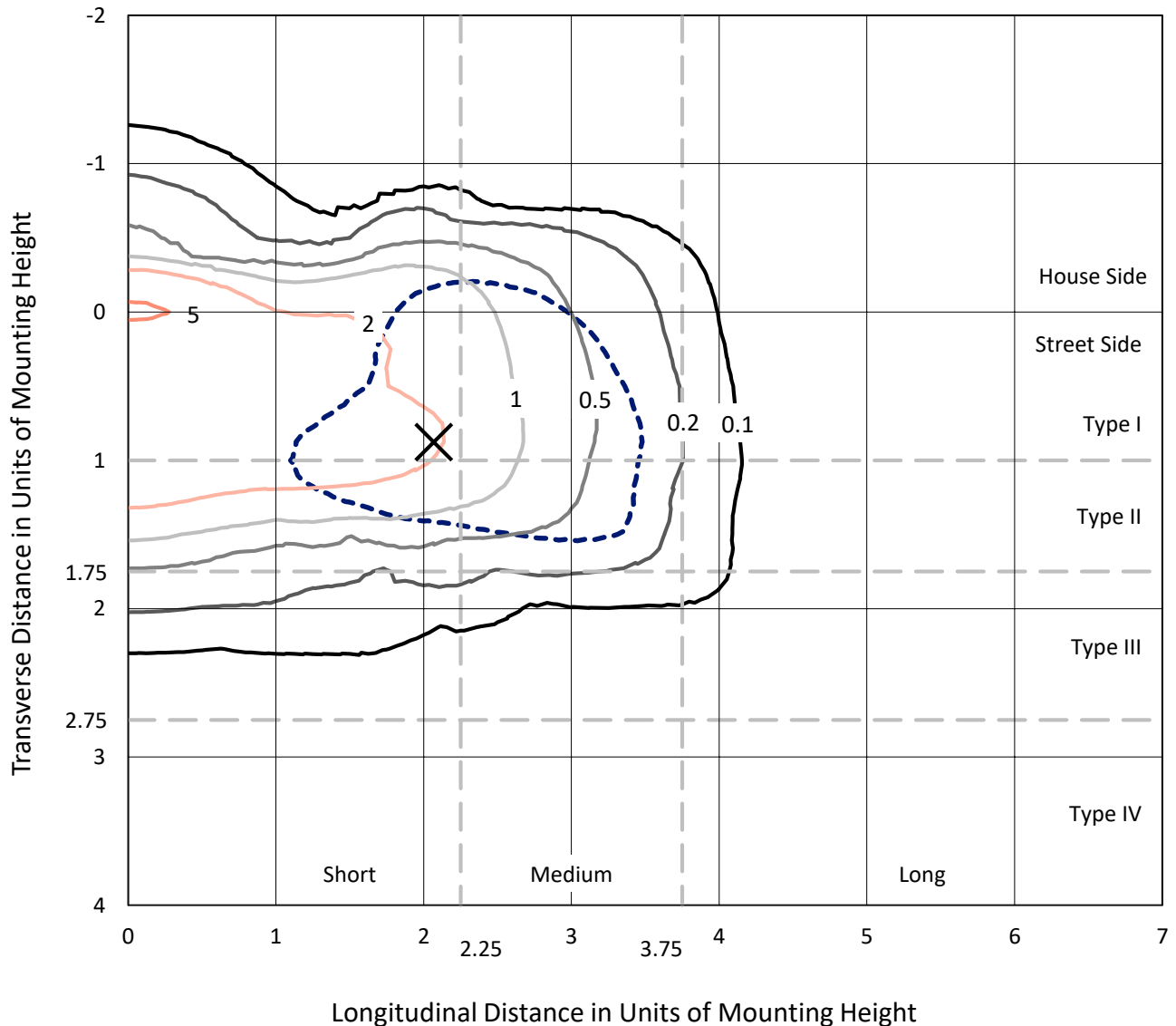


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

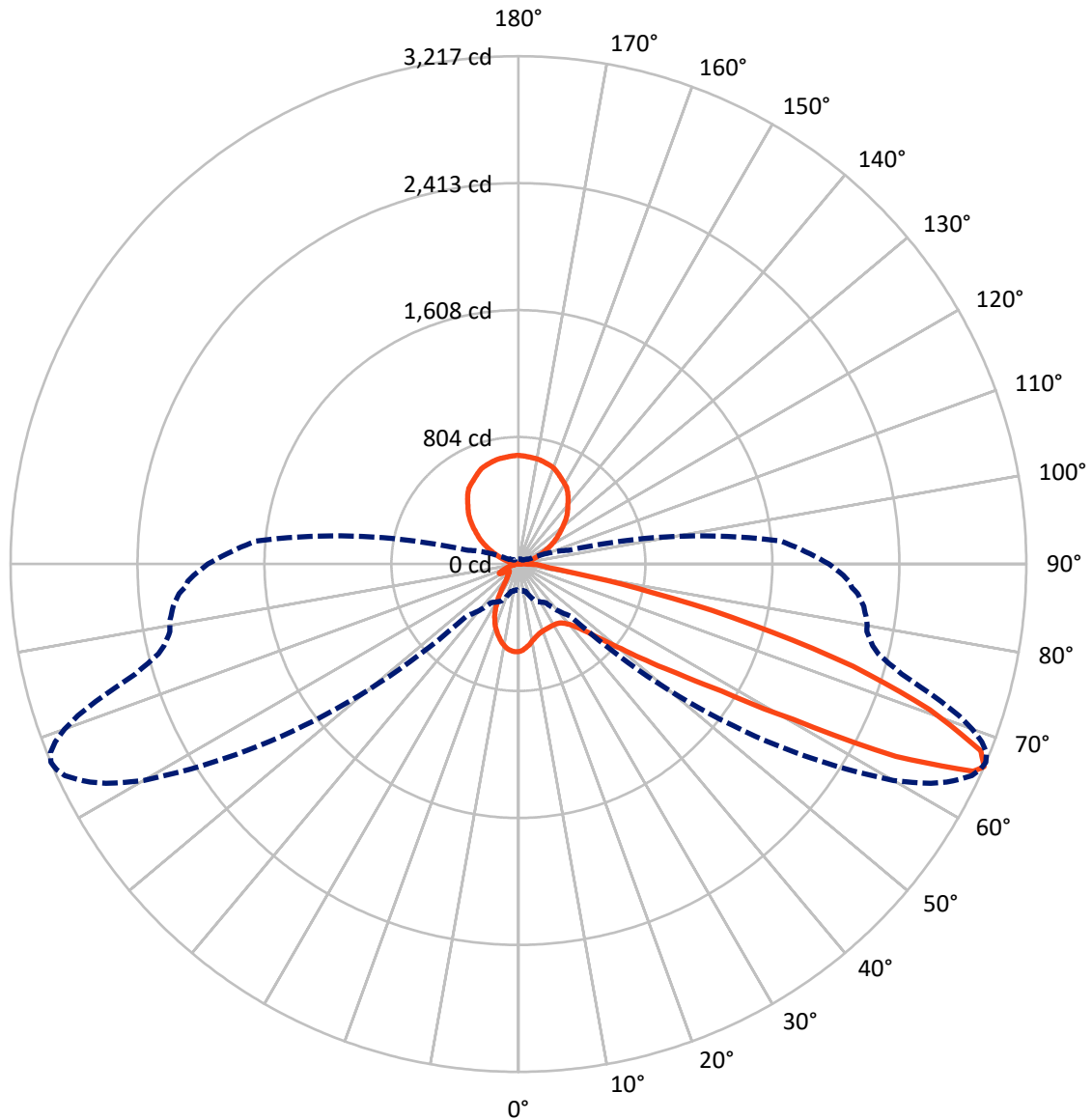


Based on 10 foot mounting height. Maximum calculated value = 5.5 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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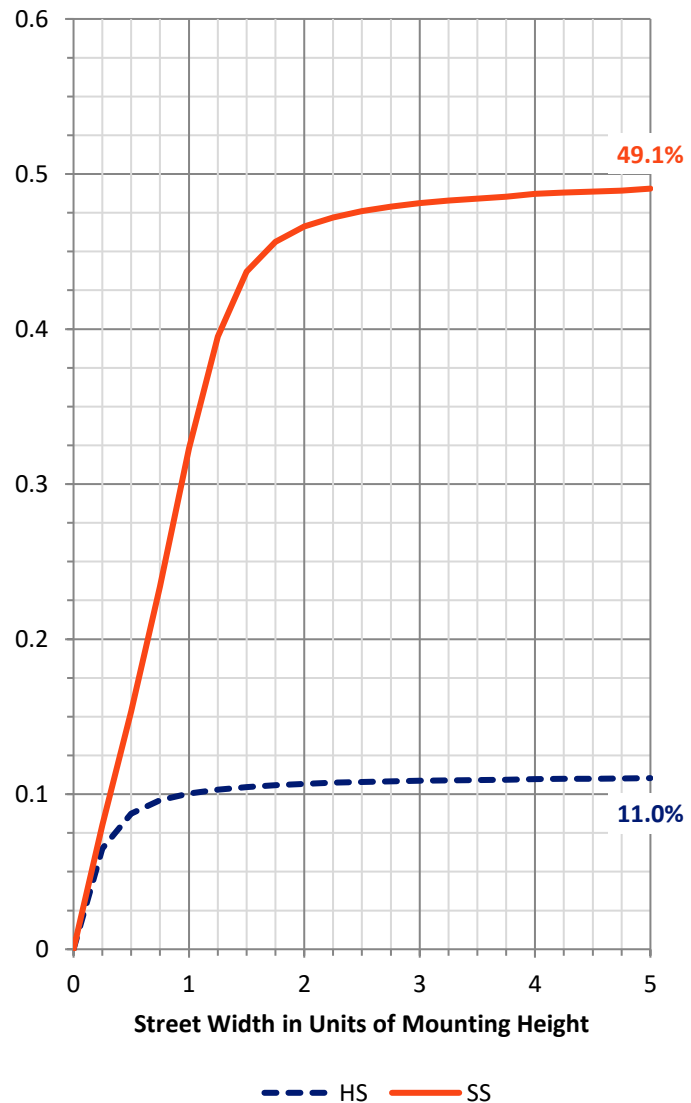
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	486.8	851.7	1338.5
	% Fixture	11.2	19.6	30.9
<b>Street Side</b>	Lumens	2146.9	852.2	2999.1
	% Fixture	49.5	19.6	69.1
<b>Total</b>	Lumens	2633.6	1703.9	4337.6
	% Fixture	60.7	39.3	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.1	1.1
10°-20°	114.4	2.6
20°-30°	156.9	3.6
30°-40°	224.1	5.2
40°-50°	363.4	8.4
50°-60°	575.8	13.3
60°-70°	729.7	16.8
70°-80°	362.7	8.4
80°-90°	58.4	1.3
90°-100°	10.0	0.2
100°-110°	56.3	1.3
110°-120°	163.0	3.8
120°-130°	268.1	6.2
130°-140°	330.6	7.6
140°-150°	338.2	7.8
150°-160°	284.9	6.6
160°-170°	187.6	4.3
170°-180°	65.0	1.5
0°-90°	2633.6	60.7
0°-180°	4337.6	100.0



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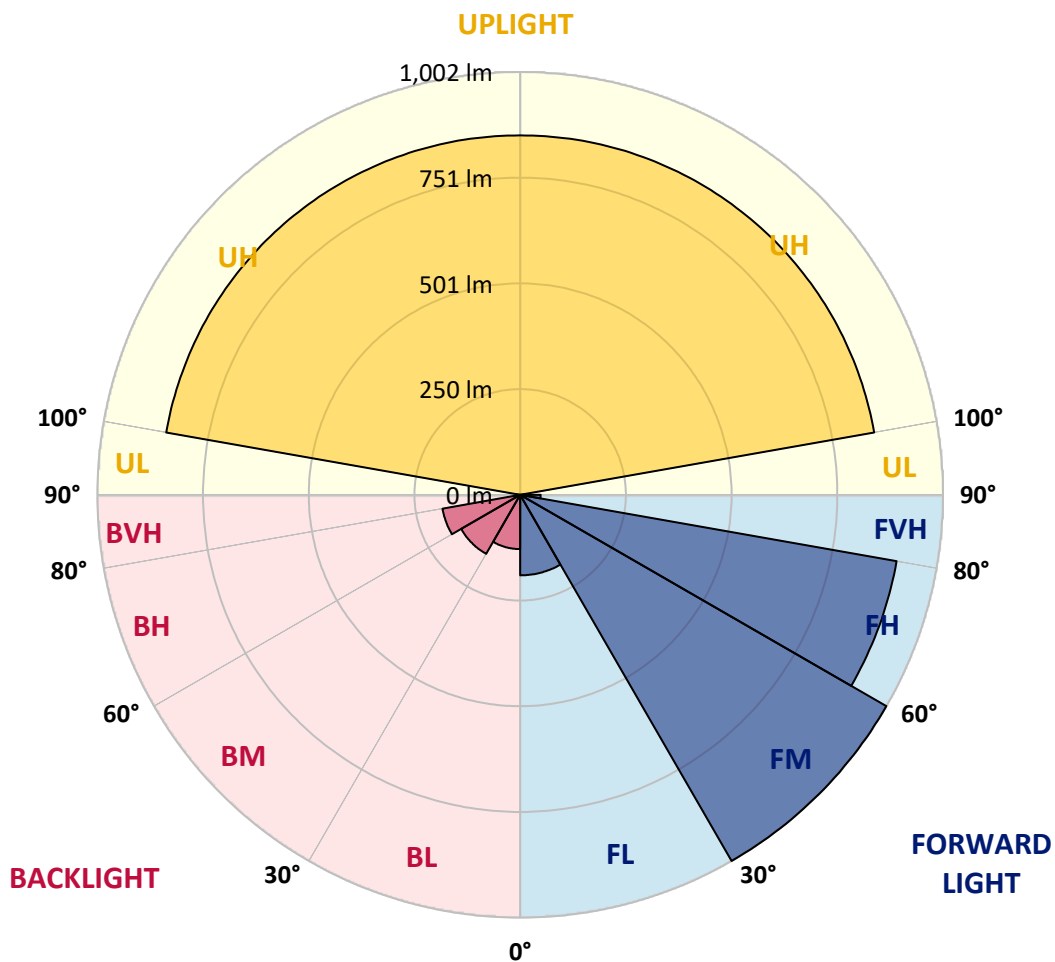
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	190.8	4.4			
FM (30°-60°)	1001.8	23.1			
FH (60°-80°)	905.6	20.9			G1/1800
FVH (80°-90°)	48.7	1.1			G1/100
BL (0°-30°)	128.6	3.0	B1/500		
BM (30°-60°)	161.6	3.7	B0/220		
BH (60°-80°)	186.9	4.3	B1/500		G1/500
BVH (80°-90°)	9.8	0.2			G0/10
UL (90°-100°)	10.0	0.2		U2/50	
UH (100°-180°)	851.7	19.6		U4/1000	

**BUG Rating: B1-U5-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	63°
0°	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3
2.5°	515.2	516.3	523.2	526.7	531.8	533.3	539.3	541.7	543.7	543.3	543.3
5°	468.8	472.5	475.7	482.7	490.3	499.4	510.9	519.5	521.1	523.2	524.3
7.5°	433.6	436.0	441.6	446.6	456.2	468.8	485.2	496.1	498.6	499.4	502.2
10°	408.7	410.3	415.1	421.8	432.8	445.1	462.2	473.7	477.2	478.8	481.1
12.5°	389.3	391.8	396.1	403.2	415.1	427.8	445.5	457.0	459.3	461.4	465.0
15°	377.1	378.6	382.6	390.5	401.3	413.8	431.3	445.1	446.6	448.7	451.8
17.5°	374.8	375.9	378.3	384.3	392.5	404.8	422.7	434.0	436.8	439.6	442.8
20°	384.3	385.0	385.8	386.6	391.3	399.3	416.6	428.9	431.3	433.6	437.7
22.5°	404.8	405.9	404.0	401.3	397.7	399.3	413.8	426.5	428.1	430.5	433.6
25°	440.3	439.2	433.3	428.9	416.3	405.9	414.7	425.3	427.3	429.7	433.3
27.5°	482.3	480.8	477.2	465.3	444.3	423.4	419.4	427.3	428.5	430.5	433.6
30°	527.5	527.8	524.7	511.7	484.6	449.5	430.1	432.1	432.8	434.5	436.5
32.5°	568.2	574.2	573.7	573.0	534.5	484.6	450.7	442.8	441.6	442.8	443.5
35°	615.2	616.5	627.6	633.0	601.9	536.2	480.8	463.3	458.6	458.9	458.1
37.5°	665.9	667.5	686.6	696.0	671.8	594.7	520.7	493.8	489.5	485.2	481.9
40°	739.6	745.9	755.7	766.4	754.6	673.4	573.4	537.0	525.9	525.1	518.7
42.5°	849.4	847.6	842.8	851.5	837.2	761.7	637.1	597.8	589.6	578.5	569.7
45°	957.5	961.8	941.3	945.3	946.0	863.8	729.2	674.3	669.9	656.8	647.3
47.5°	1030.4	1025.5	997.8	1018.0	1067.5	982.8	836.1	778.3	769.2	762.5	756.6
50°	1034.3	1030.4	1012.5	1048.1	1153.9	1194.6	984.8	917.6	904.5	892.6	889.1
52.5°	937.7	932.2	938.2	1010.5	1185.0	1371.8	1194.9	1090.5	1079.9	1069.9	1056.0
55°	765.6	771.9	800.1	904.1	1137.2	1497.7	1608.4	1357.6	1311.6	1311.3	1277.2
57.5°	571.7	565.4	586.4	684.1	1016.2	1542.3	1988.3	1926.1	1823.6	1754.4	1670.9
60°	385.8	387.3	406.8	457.0	707.1	1493.7	2242.7	2459.1	2423.1	2408.4	2385.9
62.5°	267.4	269.9	287.6	334.8	413.5	1201.7	2317.1	2757.9	2822.4	2875.7	2862.7
65°	187.2	187.6	205.4	278.1	309.8	617.2	2152.9	2797.4	2893.6	2985.3	3067.7
66°	165.0	165.4	180.0	258.8	297.2	465.7	2010.5	2742.4	2852.1	2958.8	3044.0
67.5°	141.2	143.5	155.0	219.9	284.9	359.3	1660.7	2578.2	2693.0	2810.4	2922.8
70°	96.9	97.7	108.1	178.4	266.7	315.3	946.5	2012.8	2171.5	2378.0	2497.5
72.5°	69.2	68.5	69.7	110.4	273.8	313.4	497.4	1324.7	1546.7	1727.9	1857.3
75°	61.7	59.7	54.5	68.5	199.9	342.3	333.1	779.9	948.8	1113.8	1246.4
77.5°	55.0	51.8	49.0	52.6	98.9	322.5	299.1	446.6	533.0	656.0	758.1
80°	42.0	40.0	41.5	45.5	59.4	296.8	297.2	297.2	320.4	360.8	401.3
82.5°	27.7	25.3	28.8	37.5	44.7	223.6	307.0	262.3	257.9	256.4	259.3
85°	17.3	15.0	20.2	28.0	34.5	116.7	314.9	276.9	256.7	237.4	218.0
87.5°	6.4	7.2	10.3	16.2	22.5	50.7	276.2	244.1	230.2	206.1	183.6
90°	6.5	6.1	8.8	12.6	12.9	16.3	49.1	75.5	48.4	28.5	24.6
92.5°	4.0	4.0	4.9	5.9	5.9	5.9	6.8	6.8	6.8	6.8	6.8
95°	4.9	4.9	5.9	6.8	6.8	6.8	6.8	7.4	7.5	7.5	7.6
97.5°	6.8	6.8	7.8	7.8	8.8	8.8	11.8	10.8	10.6	10.4	10.2
100°	7.8	7.8	8.8	9.8	11.8	20.6	28.5	26.9	26.7	26.4	26.1
102.5°	10.8	10.8	12.8	17.7	26.5	39.3	49.0	47.6	47.3	47.0	46.7
105°	20.6	21.6	26.5	35.3	47.1	61.8	70.7	69.7	69.5	69.3	69.1
107.5°	40.2	41.2	48.1	57.0	71.7	86.3	93.2	92.7	92.6	92.5	92.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	63°
110°	64.8	66.7	72.7	85.4	100.1	111.9	117.8	118.3	118.4	118.5	118.6
112.5°	97.2	97.2	104.0	118.8	131.5	140.3	145.3	146.2	146.4	146.6	146.9
115°	137.4	136.5	144.3	156.0	164.9	170.8	175.7	177.1	177.4	177.8	178.0
117.5°	180.6	180.6	185.5	193.3	198.3	201.2	207.1	209.0	209.5	209.8	210.2
120°	220.8	218.8	221.8	228.7	232.6	238.5	241.5	243.4	243.8	244.2	244.6
122.5°	258.2	255.2	256.2	262.0	266.0	271.8	273.8	275.8	276.2	276.6	276.9
125°	292.5	288.5	290.5	293.5	299.3	304.3	307.2	308.2	308.4	308.6	308.7
127.5°	323.9	322.9	322.9	326.8	332.7	333.7	338.6	339.1	339.2	339.3	339.4
130°	356.3	354.3	355.3	359.2	363.2	365.1	370.0	372.0	372.3	372.8	373.2
132.5°	388.7	386.7	385.7	393.5	396.5	397.5	403.4	405.9	406.3	406.8	407.3
135°	421.0	418.1	418.1	424.0	427.0	428.9	434.8	437.3	437.7	438.2	438.7
137.5°	451.5	448.5	450.5	451.5	455.4	459.3	464.2	465.2	465.4	465.6	465.8
140°	479.0	476.0	478.0	480.0	481.9	487.8	490.7	491.7	491.9	492.1	492.3
142.5°	508.4	505.5	507.5	508.4	511.3	515.3	517.2	520.2	520.7	521.4	521.9
145°	539.8	535.9	534.0	536.8	539.8	540.8	545.7	548.7	549.2	549.9	550.4
147.5°	564.3	561.4	560.5	563.3	563.3	564.3	569.3	571.7	572.2	572.7	573.2
150°	584.0	581.0	582.0	582.0	582.0	582.0	586.0	587.4	587.7	588.0	588.3
152.5°	599.7	596.7	596.7	597.7	598.7	598.7	599.7	601.1	601.4	601.8	602.0
155°	617.3	613.5	613.5	615.4	618.3	616.3	614.4	616.9	617.3	617.9	618.3
157.5°	634.0	631.1	631.1	632.0	634.0	633.0	632.0	634.0	634.5	634.8	635.2
160°	650.7	647.8	646.8	643.8	642.8	642.8	645.8	648.8	649.4	649.9	650.6
162.5°	660.5	656.6	656.6	652.7	648.8	650.7	654.7	656.6	657.0	657.4	657.8
165°	668.4	665.5	663.5	663.5	660.5	660.5	659.5	662.1	662.5	662.9	663.5
167.5°	677.2	674.3	671.3	673.3	675.3	672.3	665.5	668.4	669.0	669.6	670.1
170°	685.0	682.2	679.2	679.2	680.2	678.2	673.3	674.8	675.1	675.3	675.6
172.5°	686.0	684.1	682.2	680.2	677.2	677.2	676.2	677.7	678.0	678.3	678.6
175°	687.0	685.0	684.1	682.2	678.2	677.2	677.2	679.7	680.2	680.6	681.2
177.5°	693.9	692.0	687.0	686.0	684.1	682.2	681.2	683.6	684.1	684.6	685.0
180°	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0





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**CANDELA DISTRIBUTION (continued):**

	64°	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°
0°	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3
2.5°	543.7	545.6	546.3	545.6	546.0	548.4	547.6	548.9	548.9	549.7	549.7
5°	525.9	527.5	530.6	530.2	533.3	534.5	535.7	537.4	539.3	540.5	542.8
7.5°	504.8	508.0	510.9	512.4	514.4	518.3	519.5	523.2	526.2	529.4	531.8
10°	484.6	489.0	492.2	493.3	497.8	499.7	504.1	506.8	510.9	514.8	518.3
12.5°	467.7	471.6	473.2	477.2	481.1	485.2	487.2	492.2	496.1	501.3	506.0
15°	455.0	458.9	462.2	465.0	468.8	472.9	476.0	481.1	485.9	491.0	495.3
17.5°	447.2	449.5	453.5	455.8	460.7	465.3	468.8	474.8	480.0	484.3	490.3
20°	441.2	443.9	447.5	451.1	455.4	461.4	464.5	470.8	476.4	481.5	487.2
22.5°	438.0	440.8	444.3	448.0	452.7	457.3	462.5	468.1	474.0	479.5	485.2
25°	436.8	439.2	442.3	445.9	451.1	456.2	460.7	466.8	472.0	478.0	484.6
27.5°	437.3	438.8	442.3	445.5	450.7	455.4	459.8	466.1	472.0	477.6	484.3
30°	438.8	440.0	443.5	446.3	450.7	455.4	459.3	466.1	471.3	477.2	484.3
32.5°	444.3	445.9	447.5	449.5	453.5	457.0	461.8	467.7	472.5	478.3	484.3
35°	457.3	456.2	457.3	458.1	461.0	464.5	468.1	473.2	477.6	482.7	489.0
37.5°	478.0	475.7	476.4	476.0	476.0	478.3	481.9	485.5	489.0	494.2	500.5
40°	516.0	510.1	508.4	504.1	502.9	504.8	507.3	507.6	512.0	518.7	521.5
42.5°	565.0	557.1	558.3	551.2	549.2	546.8	550.0	548.1	550.8	555.2	561.1
45°	642.6	635.0	627.2	615.7	618.0	609.3	607.0	607.7	607.3	608.9	616.1
47.5°	735.2	725.3	720.1	715.8	707.4	702.4	695.6	685.7	688.1	691.2	697.5
50°	870.5	867.3	857.4	843.1	841.3	833.6	831.7	822.9	819.8	819.4	819.1
52.5°	1051.3	1030.7	1026.9	1013.3	1003.0	996.0	993.5	981.3	969.0	976.2	975.3
55°	1271.7	1254.8	1232.9	1221.1	1212.7	1195.7	1191.4	1175.9	1168.9	1164.9	1155.0
57.5°	1642.0	1582.4	1537.6	1515.4	1484.2	1452.5	1441.4	1409.8	1385.3	1367.8	1369.1
60°	2287.8	2181.4	2056.0	1999.8	1869.6	1850.6	1761.1	1739.4	1685.6	1650.0	1629.3
62.5°	2853.6	2824.7	2764.6	2682.7	2552.2	2401.8	2334.1	2199.6	2094.3	2048.5	1984.7
65°	3123.9	3164.5	3181.3	3165.8	3113.5	3021.8	2941.1	2809.7	2633.2	2533.5	2409.6
66°	3110.0	3170.6	3201.0	3216.8	3197.9	3143.7	3059.0	2950.9	2814.5	2662.5	2523.6
67.5°	3008.7	3067.7	3110.0	3158.4	3158.4	3141.2	3106.9	3034.8	2938.3	2805.8	2681.1
70°	2594.8	2674.7	2749.5	2764.3	2805.4	2792.7	2820.0	2774.1	2751.1	2695.7	2628.9
72.5°	2021.5	2088.4	2152.5	2216.6	2205.9	2192.0	2189.3	2198.8	2152.1	2168.7	2151.4
75°	1344.5	1459.7	1525.3	1519.0	1523.3	1526.8	1497.7	1432.3	1483.0	1419.0	1440.3
77.5°	817.1	870.5	888.3	868.5	842.8	809.6	756.1	724.9	680.2	683.7	654.1
80°	428.5	435.3	420.9	381.0	359.3	339.5	278.6	251.3	225.9	216.4	195.0
82.5°	245.8	229.4	212.1	198.6	172.9	155.5	131.7	116.7	100.5	86.2	81.0
85°	199.1	177.2	161.1	146.1	128.5	113.2	93.3	78.0	66.0	57.4	55.3
87.5°	164.2	149.2	132.6	118.3	101.3	85.5	66.0	51.5	40.7	32.9	30.5
90°	23.3	28.7	23.1	16.8	20.8	15.2	12.4	12.8	11.9	11.9	12.4
92.5°	6.8	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.1	6.0
95°	7.7	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.0
97.5°	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.3	9.2	9.1	8.9
100°	25.8	25.5	25.2	25.0	24.6	24.3	24.1	23.7	23.4	23.2	22.9
102.5°	46.4	46.2	45.6	45.2	44.6	44.2	43.7	43.2	42.7	42.2	41.7
105°	68.9	68.7	68.2	67.7	67.2	66.7	66.3	65.8	65.3	64.8	64.3
107.5°	92.3	92.3	91.9	91.4	91.1	90.7	90.3	89.9	89.5	89.1	88.8



REPORT NUMBER: P271702

CATALOG NUMBER: IST-AF-450-LED-E1-SL2-7027-ULG

**CANDELA DISTRIBUTION (continued):**

	64°	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°
110°	118.7	118.8	118.6	118.4	118.1	117.9	117.8	117.6	117.4	117.2	117.0
112.5°	147.1	147.2	147.1	147.1	147.0	146.9	146.7	146.6	146.5	146.4	146.3
115°	178.3	178.7	178.3	178.0	177.8	177.4	177.1	176.9	176.6	176.2	176.0
117.5°	210.7	211.0	210.6	210.0	209.6	209.0	208.6	208.0	207.6	207.1	206.6
120°	245.0	245.3	244.9	244.4	243.9	243.4	242.9	242.5	241.9	241.5	240.9
122.5°	277.4	277.8	277.3	276.8	276.3	275.8	275.3	274.8	274.3	273.8	273.4
125°	308.9	309.2	308.7	308.2	307.7	307.2	306.7	306.2	305.7	305.2	304.7
127.5°	339.5	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6
130°	373.5	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0
132.5°	407.8	408.3	408.1	407.9	407.7	407.5	407.3	407.1	406.9	406.8	406.6
135°	439.2	439.7	439.6	439.5	439.5	439.3	439.2	439.1	439.0	438.9	438.8
137.5°	466.0	466.2	466.3	466.4	466.5	466.6	466.7	466.8	466.8	467.0	467.1
140°	492.5	492.7	492.9	493.1	493.3	493.5	493.7	493.9	494.1	494.2	494.4
142.5°	522.5	523.2	523.2	523.2	523.2	523.2	523.2	523.2	523.2	523.2	523.2
145°	551.0	551.6	551.5	551.4	551.3	551.2	551.1	551.0	550.9	550.8	550.8
147.5°	573.7	574.2	574.3	574.4	574.5	574.6	574.6	574.7	574.8	574.9	575.1
150°	588.6	588.9	589.2	589.5	589.7	590.1	590.4	590.6	590.9	591.3	591.5
152.5°	602.3	602.7	603.0	603.4	603.8	604.2	604.6	605.0	605.4	605.7	606.2
155°	618.8	619.3	619.8	620.3	620.8	621.3	621.8	622.3	622.7	623.2	623.7
157.5°	635.6	636.0	636.2	636.4	636.6	636.8	637.0	637.2	637.3	637.5	637.8
160°	651.1	651.7	651.5	651.1	650.8	650.6	650.2	649.9	649.7	649.4	649.0
162.5°	658.2	658.5	658.5	658.4	658.3	658.2	658.1	658.0	657.9	657.8	657.6
165°	663.9	664.5	664.7	665.0	665.4	665.6	665.9	666.3	666.5	666.8	667.1
167.5°	670.8	671.3	671.8	672.1	672.5	672.9	673.3	673.7	674.1	674.4	674.9
170°	676.0	676.2	676.7	677.2	677.7	678.2	678.7	679.2	679.7	680.2	680.6
172.5°	678.8	679.2	679.4	679.6	679.7	679.9	680.2	680.4	680.6	680.7	680.9
175°	681.6	682.2	682.3	682.4	682.4	682.5	682.6	682.7	682.8	682.9	683.0
177.5°	685.6	686.0	686.2	686.5	686.7	686.8	687.0	687.2	687.5	687.7	687.8
180°	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0



REPORT NUMBER: P271702

CATALOG NUMBER: IST-AF-450-LED-E1-SL2-7027-ULG

**CANDELA DISTRIBUTION (continued):**

	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°
0°	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3
2.5°	550.8	550.8	551.6	552.4	552.7	552.7	552.7	553.5	554.0	552.7	554.0
5°	544.0	546.0	547.6	548.9	549.2	550.4	551.6	552.4	553.5	553.5	554.3
7.5°	534.9	538.5	540.5	542.5	544.5	546.3	548.9	550.4	551.2	552.7	554.0
10°	523.5	527.8	531.8	534.9	537.7	541.7	544.8	547.2	550.8	551.2	554.0
12.5°	511.2	517.5	520.7	526.7	530.6	536.6	539.7	543.3	547.2	549.2	552.4
15°	502.5	508.0	514.0	519.5	525.9	533.0	537.0	541.7	547.2	551.6	555.5
17.5°	495.8	503.3	510.1	517.2	525.1	532.5	538.5	543.7	550.8	553.2	557.1
20°	493.8	502.2	508.8	516.3	524.7	534.5	541.7	547.2	554.3	558.3	561.9
22.5°	493.0	501.0	508.8	518.0	527.0	537.4	544.8	552.0	559.0	562.7	565.4
25°	492.2	500.5	509.2	519.5	529.4	540.2	548.9	555.5	562.2	565.8	568.2
27.5°	492.2	501.0	510.5	520.7	531.3	543.3	551.6	557.8	563.9	567.0	567.8
30°	491.8	501.0	510.1	521.5	533.0	545.2	554.3	560.3	565.4	567.4	566.7
32.5°	492.6	502.2	512.0	523.5	535.4	547.2	556.7	563.5	566.2	565.8	565.4
35°	496.5	505.3	516.7	528.2	540.5	551.6	560.7	565.4	567.8	567.0	565.0
37.5°	507.3	516.0	527.5	540.2	549.7	562.2	570.5	574.2	574.6	572.1	567.4
40°	529.4	538.2	548.4	562.2	573.7	582.4	590.4	594.3	591.9	587.6	582.4
42.5°	564.7	575.7	588.0	599.1	612.6	624.4	626.4	628.7	624.8	616.5	610.1
45°	621.2	627.9	643.7	652.1	669.5	675.4	679.7	680.9	672.2	665.6	654.4
47.5°	702.7	715.8	726.9	734.7	747.4	755.4	764.1	760.1	753.4	741.9	727.3
50°	830.9	839.3	853.5	867.8	881.1	886.6	886.6	882.8	878.5	856.3	838.5
52.5°	988.5	989.2	1009.8	1026.9	1038.2	1030.0	1039.9	1030.0	1027.2	1011.7	997.1
55°	1170.9	1163.2	1188.2	1203.3	1213.5	1223.4	1221.4	1220.3	1209.9	1192.6	1174.7
57.5°	1344.1	1365.9	1377.7	1399.9	1405.1	1411.8	1409.0	1405.1	1399.1	1389.2	1381.3
60°	1594.2	1608.9	1619.6	1623.9	1638.5	1640.5	1650.4	1634.2	1638.1	1626.7	1601.7
62.5°	1934.5	1918.6	1927.0	1927.0	1922.6	1907.1	1915.5	1921.8	1911.1	1901.6	1897.7
65°	2315.5	2264.4	2215.4	2207.0	2184.6	2179.4	2173.1	2157.2	2150.5	2133.8	2120.4
66°	2429.5	2350.3	2304.1	2275.6	2248.3	2242.3	2233.5	2216.9	2203.5	2180.2	2157.5
67.5°	2557.3	2455.2	2385.4	2345.1	2311.6	2289.4	2271.9	2248.3	2226.9	2192.0	2156.0
70°	2548.9	2464.7	2380.8	2319.4	2268.8	2223.3	2196.4	2145.3	2101.9	2052.0	2010.9
72.5°	2141.8	2126.7	2078.0	2043.6	1981.5	1957.4	1886.2	1853.7	1793.6	1729.1	1709.4
75°	1488.9	1430.0	1405.1	1391.1	1363.9	1288.7	1239.6	1250.4	1179.9	1117.0	1081.0
77.5°	650.9	662.8	593.9	563.1	539.3	498.6	460.7	434.5	419.4	409.5	364.8
80°	180.0	157.0	155.0	144.0	141.7	126.2	128.2	117.0	109.6	108.1	104.5
82.5°	78.7	77.2	74.8	73.6	72.4	70.9	68.8	68.5	66.0	64.0	64.5
85°	52.2	51.8	50.7	49.5	47.5	44.7	42.7	41.1	41.5	39.5	39.2
87.5°	30.5	29.6	29.3	27.7	27.3	25.0	25.3	23.4	23.0	22.5	21.4
90°	13.1	13.4	14.4	13.7	11.9	15.5	14.0	12.9	13.1	11.8	11.6
92.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
95°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
97.5°	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	7.9	7.8
100°	22.5	22.2	21.8	21.4	21.0	20.6	20.2	19.9	19.4	19.0	18.7
102.5°	41.2	41.0	40.6	40.3	40.1	39.7	39.4	39.2	38.9	38.5	38.3
105°	63.8	63.4	63.0	62.6	62.3	61.8	61.4	61.1	60.6	60.3	59.8
107.5°	88.3	88.0	87.8	87.5	87.1	86.9	86.6	86.2	86.0	85.7	85.4



REPORT NUMBER: P271702  
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REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	
110°	116.8	116.5	116.2	115.9	115.6	115.3	115.1	114.7	114.4	114.2	113.8	0°
112.5°	146.2	146.1	145.9	145.6	145.4	145.3	145.1	144.9	144.6	144.4	144.3	2.5°
115°	175.7	175.5	175.3	175.1	174.9	174.7	174.5	174.3	174.1	173.9	173.7	5°
117.5°	206.1	205.9	205.7	205.5	205.4	205.2	204.9	204.7	204.5	204.4	204.2	7.5°
120°	240.5	240.3	240.0	239.8	239.7	239.5	239.3	239.1	238.9	238.7	238.5	10°
122.5°	272.8	272.6	272.5	272.3	272.1	271.8	271.6	271.5	271.3	271.1	270.9	12.5°
125°	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	15°
127.5°	339.6	339.5	339.4	339.3	339.2	339.1	339.0	338.9	338.8	338.8	338.6	17.5°
130°	374.0	373.8	373.5	373.3	373.2	373.0	372.8	372.5	372.3	372.2	372.0	20°
132.5°	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.3	22.5°
135°	438.7	439.0	439.3	439.6	439.9	440.2	440.5	440.8	441.1	441.3	441.7	25°
137.5°	467.2	467.7	468.2	468.6	469.2	469.6	470.2	470.6	471.1	471.6	472.1	27.5°
140°	494.7	495.1	495.7	496.1	496.7	497.1	497.6	498.1	498.6	499.1	499.5	30°
142.5°	523.2	523.3	523.4	523.4	523.5	523.6	523.7	523.8	523.9	524.0	524.1	32.5°
145°	550.6	550.3	550.0	549.8	549.4	549.1	548.9	548.5	548.2	548.0	547.7	35°
147.5°	575.2	574.8	574.6	574.3	573.9	573.7	573.4	573.1	572.8	572.5	572.2	37.5°
150°	591.8	592.2	592.4	592.7	593.0	593.3	593.6	593.9	594.2	594.5	594.8	40°
152.5°	606.5	607.1	607.5	608.1	608.5	609.1	609.5	609.9	610.5	610.9	611.5	42.5°
155°	624.2	624.4	624.6	624.8	625.0	625.2	625.4	625.6	625.8	626.0	626.2	45°
157.5°	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	47.5°
160°	648.8	648.7	648.6	648.5	648.4	648.3	648.1	648.0	647.9	647.9	647.8	50°
162.5°	657.6	657.4	657.2	657.0	656.8	656.6	656.4	656.2	656.0	655.9	655.7	52.5°
165°	667.4	667.2	667.0	666.8	666.6	666.5	666.3	666.0	665.8	665.6	665.5	55°
167.5°	675.3	675.3	675.3	675.3	675.3	675.3	675.3	675.3	675.3	675.3	675.3	57.5°
170°	681.2	681.4	681.5	681.7	681.9	682.2	682.4	682.5	682.7	682.9	683.1	60°
172.5°	681.2	681.4	681.5	681.7	681.9	682.2	682.4	682.5	682.7	682.9	683.1	62.5°
175°	683.1	682.9	682.7	682.5	682.4	682.2	681.9	681.7	681.5	681.4	681.2	65°
177.5°	688.0	687.7	687.5	687.1	686.8	686.6	686.2	685.9	685.7	685.4	685.0	66°
180°	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	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°

NUMBER: P271702  
 NUMBER: IST-AF-450-LED-E1-SL2-7027-ULG

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

**CANDELA DISTRIBUTION**

86°	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	86°	
554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	554.3	110°	114.1
555.2	555.9	556.3	555.9	556.7	556.3	556.7	556.3	554.3	554.0	553.5	112.5°	144.3
555.9	557.5	557.8	558.3	557.5	558.3	556.7	550.4	543.3	535.4	529.0	115°	173.9
556.7	558.7	559.8	559.8	560.3	559.5	553.5	539.7	523.2	506.5	493.8	117.5°	204.4
556.3	559.0	560.3	560.7	560.7	559.0	544.8	522.7	497.4	472.0	446.3	120°	238.5
555.2	557.5	559.5	559.5	559.8	554.3	532.2	500.5	464.5	426.5	392.1	122.5°	271.1
557.5	559.8	559.8	559.8	559.5	550.0	518.7	472.9	424.6	373.2	322.1	125°	304.3
561.1	562.2	561.5	561.5	559.8	545.6	503.7	445.5	382.2	314.1	242.9	127.5°	339.0
564.2	565.0	564.7	562.7	560.7	540.9	488.3	416.6	331.6	242.9	172.1	130°	372.2
567.4	568.2	566.2	563.1	560.3	534.5	469.6	379.8	274.3	166.2	113.9	132.5°	406.6
567.8	568.5	565.0	560.7	556.7	525.1	447.2	340.6	211.3	107.7	89.0	135°	441.9
567.4	566.7	560.7	555.2	550.8	513.7	422.2	291.9	140.9	81.0	77.5	137.5°	472.3
564.7	561.1	556.3	550.0	543.7	501.0	397.3	237.8	89.0	70.4	70.4	140°	500.0
560.7	557.1	551.2	542.8	535.7	488.7	368.8	182.4	71.2	64.9	65.7	142.5°	524.5
559.0	555.2	546.3	537.7	528.7	477.6	338.8	122.7	64.0	61.4	61.7	145°	548.1
562.2	555.5	546.8	537.0	526.2	468.1	307.4	85.5	60.5	57.4	58.2	147.5°	572.6
573.0	566.7	556.3	543.7	532.2	462.5	274.3	70.9	57.0	54.2	54.2	150°	595.6
598.7	590.4	576.5	561.5	547.6	466.1	244.5	64.5	54.2	51.5	51.5	152.5°	612.5
640.2	630.3	614.1	597.0	578.9	483.5	210.9	62.2	52.2	48.3	47.5	155°	626.7
711.5	698.3	677.1	656.8	635.0	513.7	176.9	60.5	49.9	46.4	44.7	157.5°	639.0
823.4	804.1	778.7	752.2	725.7	568.5	149.9	59.0	48.3	44.7	43.1	160°	648.9
967.5	954.4	922.6	888.0	856.3	678.2	134.6	57.9	47.1	42.7	41.5	162.5°	656.8
1151.0	1129.7	1104.7	1073.5	1035.8	820.2	132.9	57.4	45.9	41.1	40.3	165°	666.3
1344.9	1336.6	1294.3	1274.9	1234.1	1009.3	161.9	58.2	45.2	40.0	38.8	167.5°	676.4
1566.0	1569.2	1529.6	1508.3	1474.7	1249.1	257.5	60.5	45.2	38.8	37.5	170°	684.1
1855.3	1860.5	1813.8	1788.4	1760.0	1517.9	404.8	64.5	46.4	37.5	36.4	172.5°	684.1
2092.3	2064.7	2034.6	1990.3	1954.3	1667.7	389.8	71.7	47.9	36.4	35.2	175°	682.2
2116.9	2097.1	2059.2	2011.2	1967.3	1668.6	340.3	74.0	48.3	36.0	34.9	177.5°	685.9
2113.7	2078.5	2035.4	1995.0	1951.8	1625.8	263.1	77.2	49.5	35.2	34.0	180°	687.0
1967.3	1917.8	1875.9	1820.1	1775.1	1455.0	161.9	76.7	47.9	32.9	32.1		
1622.2	1597.0	1547.2	1502.3	1455.3	1177.6	110.9	68.5	42.3	29.6	30.0		
1049.3	1020.5	969.8	944.5	918.0	753.4	86.2	55.8	36.0	26.5	27.7		
350.2	338.8	320.1	330.4	314.9	293.6	63.3	42.3	28.8	23.0	24.5		
104.8	102.5	106.0	99.7	105.6	89.4	41.5	29.6	22.2	19.9	21.8		
62.2	61.4	61.4	61.4	59.7	55.8	27.3	20.6	17.0	16.6	18.1		
38.0	37.2	37.5	37.2	38.0	34.0	18.5	14.2	12.7	12.3	14.6		
21.8	21.8	22.2	21.4	21.8	21.0	13.0	9.2	8.4	7.9	10.7		
11.9	11.9	10.8	10.4	10.8	12.4	12.4	11.6	9.3	8.8	11.4		
5.9	5.9	5.9	5.9	5.9	5.9	5.9	6.8	6.8	5.9	5.9		
6.8	6.8	6.8	6.8	6.8	6.8	6.8	7.8	6.8	6.8	6.8		
7.8	7.8	7.8	7.8	7.8	7.8	8.8	9.8	11.8	8.8	8.8		
18.7	18.7	18.7	18.7	18.7	18.7	22.5	25.5	28.5	20.6	11.8		
38.1	37.9	37.7	37.5	37.3	38.3	41.2	46.2	49.0	39.3	26.5		
59.8	59.8	59.8	59.8	59.8	59.8	63.8	68.7	70.7	61.8	47.1		
85.2	85.0	84.8	84.6	84.4	85.4	88.3	92.3	93.2	86.3	71.7		

271702  
 IST-AF-450-LED-E1-SL2-7027-ULG

REPORT NUMBER: P271702  
 CATALOG NUMBER: IST-AF-450

**TION (continued):**

**CANDELA DISTRIBUTION (con**

87°	88°	89°	90°	95°	105°	115°	125°	135°	145°		155°	165°
114.3	114.4	114.6	114.8	113.8	116.8	118.8	117.8	111.9	100.1	0°	554.3	554.3
144.3	144.3	144.3	144.3	144.3	146.2	147.2	145.3	140.3	131.5	2.5°	550.4	547.6
174.1	174.3	174.5	174.7	173.7	175.7	178.7	175.7	170.8	164.9	5°	519.1	511.7
204.5	204.7	204.9	205.2	204.2	206.1	211.0	207.1	201.2	198.3	7.5°	474.0	465.3
238.5	238.5	238.5	238.5	238.5	240.5	245.3	241.5	238.5	232.6	10°	422.7	409.5
271.3	271.5	271.6	271.8	270.9	272.8	277.8	273.8	271.8	266.0	12.5°	356.9	331.1
304.3	304.3	304.3	304.3	304.3	304.3	309.2	307.2	304.3	299.3	15°	280.9	246.6
339.4	339.8	340.2	340.5	338.6	339.6	339.6	338.6	333.7	332.7	17.5°	193.5	165.7
372.3	372.5	372.8	373.0	372.0	374.0	374.0	370.0	365.1	363.2	20°	135.7	125.4
406.8	406.9	407.1	407.3	406.3	406.3	408.3	403.4	397.5	396.5	22.5°	104.8	105.2
442.1	442.2	442.4	442.7	441.7	438.7	439.7	434.8	428.9	427.0	25°	87.0	91.0
472.5	472.7	472.9	473.0	472.1	467.2	466.2	464.2	459.3	455.4	27.5°	76.7	80.7
500.4	500.7	501.2	501.5	499.5	494.7	492.7	490.7	487.8	481.9	30°	70.4	74.0
524.9	525.3	525.7	526.0	524.1	523.2	523.2	517.2	515.3	511.3	32.5°	66.0	67.6
548.4	548.9	549.2	549.7	547.7	550.6	551.6	545.7	540.8	539.8	35°	60.9	61.7
573.0	573.4	573.7	574.2	572.2	575.2	574.2	569.3	564.3	563.3	37.5°	56.5	56.5
596.4	597.1	597.9	598.7	594.8	591.8	588.9	586.0	582.0	582.0	40°	52.6	52.2
613.5	614.4	615.4	616.3	611.5	606.5	602.7	599.7	598.7	598.7	42.5°	49.0	48.7
627.4	627.9	628.5	629.2	626.2	624.2	619.3	614.4	616.3	618.3	45°	45.5	45.9
640.0	640.9	641.9	642.8	638.0	638.0	636.0	632.0	633.0	634.0	47.5°	43.5	43.8
650.1	651.3	652.5	653.7	647.8	648.8	651.7	645.8	642.8	642.8	50°	41.5	42.0
658.0	659.2	660.3	661.5	655.7	657.6	658.5	654.7	650.7	648.8	52.5°	40.0	40.0
667.0	667.8	668.6	669.3	665.5	667.4	664.5	659.5	660.5	660.5	55°	38.4	38.0
677.6	678.8	679.9	681.2	675.3	675.3	671.3	665.5	672.3	675.3	57.5°	37.2	36.4
685.0	686.0	687.0	688.0	683.1	681.2	676.2	673.3	678.2	680.2	60°	36.0	35.2
685.0	686.0	687.0	688.0	683.1	681.2	679.2	676.2	677.2	677.2	62.5°	35.2	34.0
683.1	684.1	685.0	686.0	681.2	683.1	682.2	677.2	677.2	678.2	65°	34.5	33.7
686.7	687.5	688.2	689.0	685.0	688.0	686.0	681.2	682.2	684.1	66°	34.0	33.2
687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	67.5°	33.7	32.9
										70°	32.1	31.2
										72.5°	29.6	29.3
										75°	27.3	26.5
										77.5°	24.2	23.7
										80°	20.6	20.2
										82.5°	17.3	16.6
										85°	13.8	13.0
										87.5°	9.5	8.7
										90°	10.2	9.6
										92.5°	5.9	4.9
										95°	6.8	5.9
										97.5°	7.8	7.8
										100°	9.8	8.8
										102.5°	17.7	12.8
										105°	35.3	26.5
										107.5°	57.0	48.1



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**tinued):**

175°	180°
554.3	554.3
545.2	548.9
509.2	508.0
458.1	458.6
396.4	397.3
316.6	311.8
226.7	228.7
157.9	157.6
126.6	127.4
108.4	108.4
96.6	96.6
85.1	85.5
77.2	78.0
70.1	70.4
62.9	63.3
57.0	57.0
53.0	53.4
50.2	50.2
47.5	47.5
45.2	45.9
42.7	43.1
40.3	40.7
38.0	38.0
36.0	36.0
34.5	34.0
33.2	32.5
32.1	31.7
31.7	31.2
31.2	30.8
30.5	30.0
29.3	28.8
26.9	26.1
24.5	23.7
22.5	21.4
19.0	18.1
13.8	13.0
8.4	8.4
6.8	6.8
4.0	4.0
4.9	4.9
6.8	6.8
7.8	7.8
10.8	10.8
21.6	20.6
41.2	40.2

**CANDELA DISTRIBUTION (continued):**

	155°	165°	175°
110°	85.4	72.7	66.7
112.5°	118.8	104.0	97.2
115°	156.0	144.3	136.5
117.5°	193.3	185.5	180.6
120°	228.7	221.8	218.8
122.5°	262.0	256.2	255.2
125°	293.5	290.5	288.5
127.5°	326.8	322.9	322.9
130°	359.2	355.3	354.3
132.5°	393.5	385.7	386.7
135°	424.0	418.1	418.1
137.5°	451.5	450.5	448.5
140°	480.0	478.0	476.0
142.5°	508.4	507.5	505.5
145°	536.8	534.0	535.9
147.5°	563.3	560.5	561.4
150°	582.0	582.0	581.0
152.5°	597.7	596.7	596.7
155°	615.4	613.5	613.5
157.5°	632.0	631.1	631.1
160°	643.8	646.8	647.8
162.5°	652.7	656.6	656.6
165°	663.5	663.5	665.5
167.5°	673.3	671.3	674.3
170°	679.2	679.2	682.2
172.5°	680.2	682.2	684.1
175°	682.2	684.1	685.0
177.5°	686.0	687.0	692.0
180°	687.0	687.0	687.0



İL2-7027-ULG

180°
64.8
97.2
137.4
180.6
220.8
258.2
292.5
323.9
356.3
388.7
421.0
451.5
479.0
508.4
539.8
564.3
584.0
599.7
617.3
634.0
650.7
660.5
668.4
677.2
685.0
686.0
687.0
693.9
687.0

(END OF REPORT)