

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: P227005

Luminaire Tested: **IST-AF-450-LED-E1-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227005
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35946)
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-SL3
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III W/SPILL CONTROL
Light Source: (16) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3037.8 lumens
Efficiency: N/A
Efficacy: 120.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U1 - G1

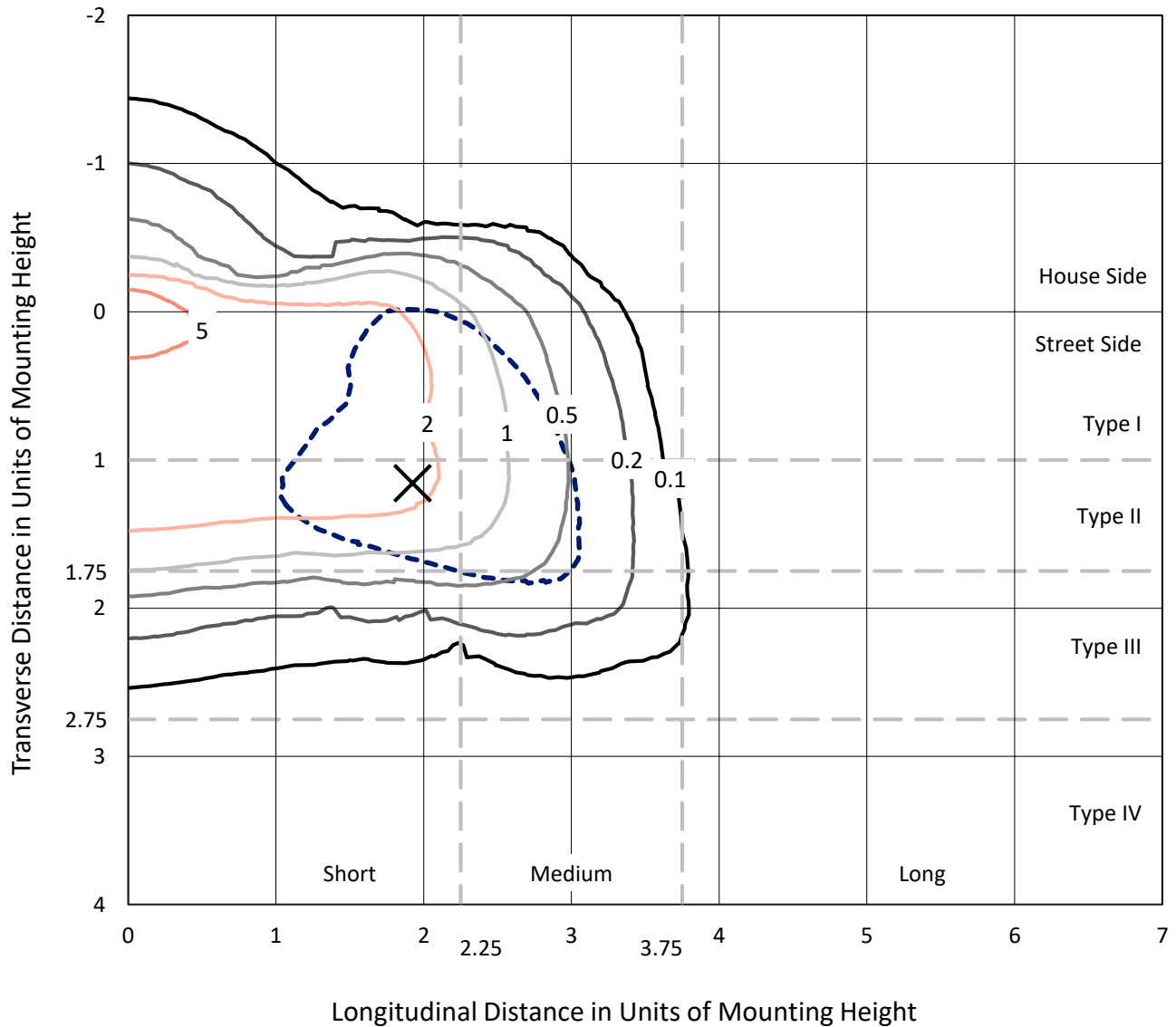
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

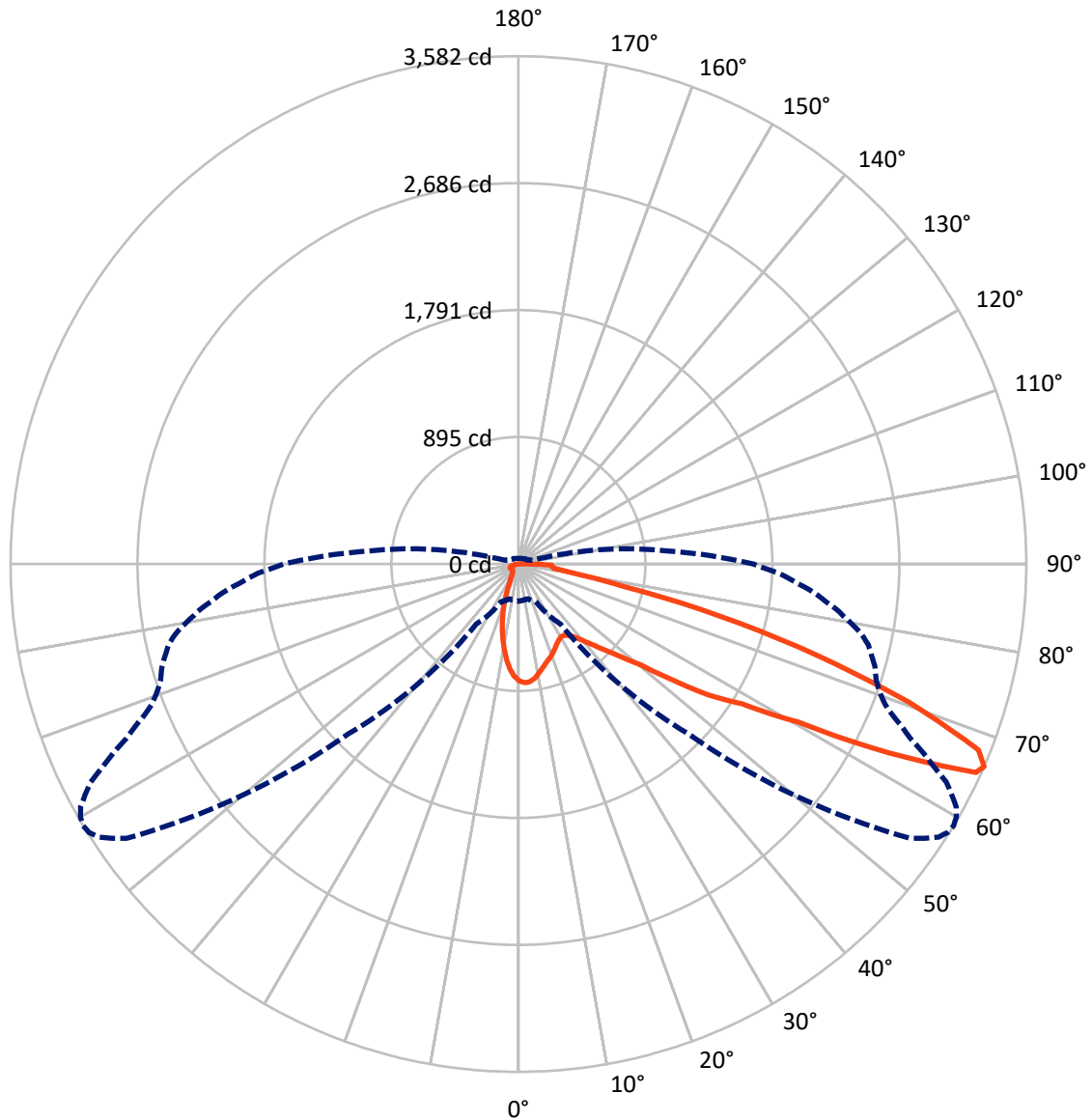
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.3 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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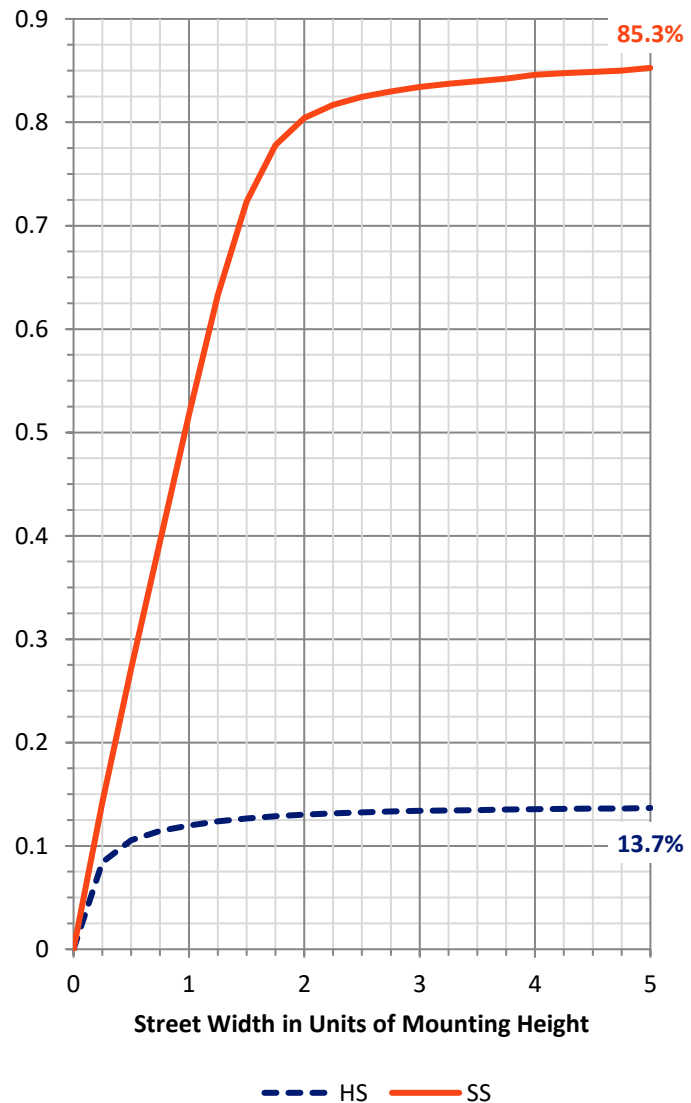
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	421.5	0.2	421.7
	% Fixture	13.9	0.0	13.9
Street Side	Lumens	2615.0	1.1	2616.1
	% Fixture	86.1	0.0	86.1
Total	Lumens	3036.5	1.3	3037.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.3	2.3
10°-20°	148.6	4.9
20°-30°	186.4	6.1
30°-40°	255.0	8.4
40°-50°	410.3	13.5
50°-60°	712.9	23.5
60°-70°	866.2	28.5
70°-80°	323.1	10.6
80°-90°	63.6	2.1
90°-100°	1.3	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	3036.5	100.0
0°-180°	3037.8	100.0

Coefficient of Utilization



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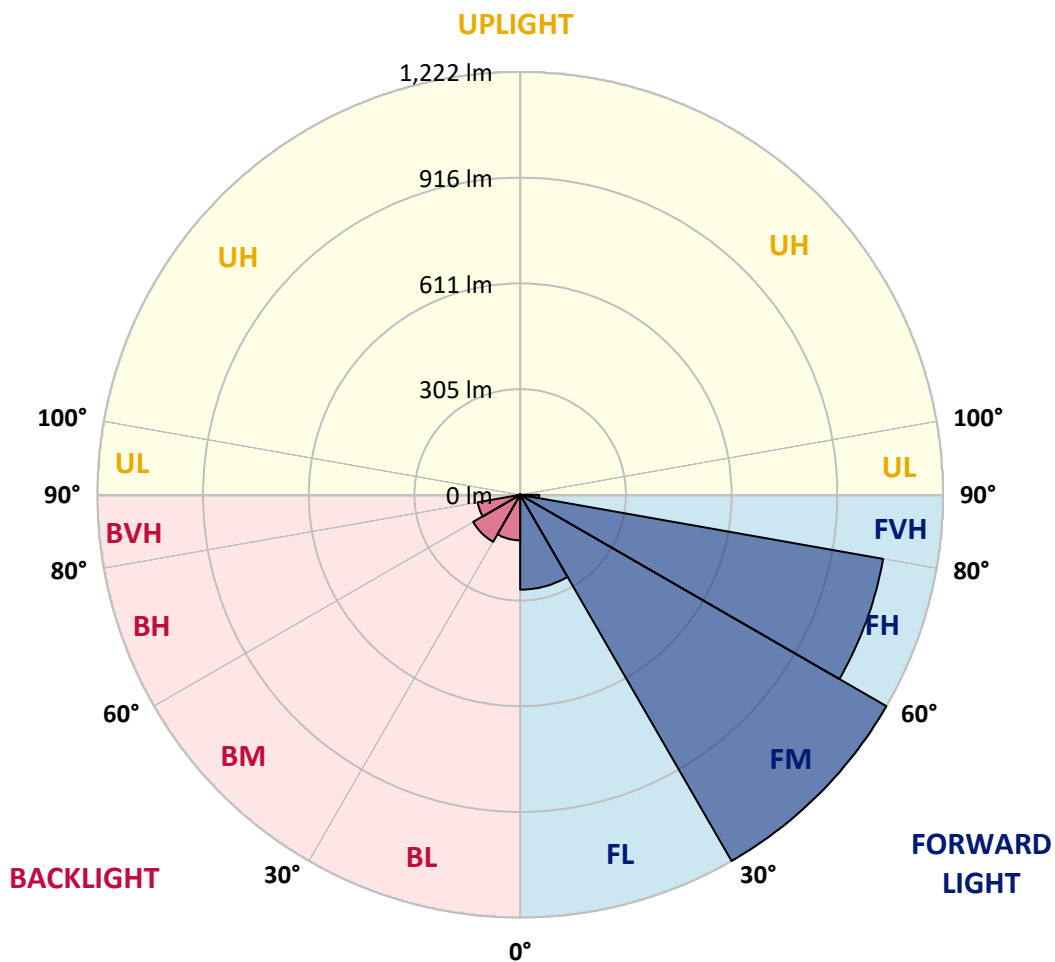
CATALOG NUMBER: IST-AF-450-LED-E1-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	273.9	9.0			
FM (30°-60°)	1221.5	40.2			
FH (60°-80°)	1064.7	35.0			G1/1800
FVH (80°-90°)	54.8	1.8			G1/100
BL (0°-30°)	131.4	4.3	B1/500		
BM (30°-60°)	156.7	5.2	B0/220		
BH (60°-80°)	124.6	4.1	B1/500		G1/500
BVH (80°-90°)	8.7	0.3			G0/10
UL (90°-100°)	1.3	0.0		U1/10	
UH (100°-180°)	0.2	0.0		U1/10	

BUG Rating: B1-U1-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3
2.5°	846.7	843.9	849.0	847.2	848.5	841.6	840.1	838.8	839.7	838.3	838.3
5°	826.6	825.3	831.4	834.6	837.4	836.5	836.0	836.0	836.5	833.2	833.7
7.5°	768.0	767.1	775.4	781.5	795.0	802.9	813.1	813.7	814.6	813.1	816.0
10°	705.6	708.4	715.9	725.6	745.6	757.7	777.3	781.0	782.5	782.9	783.4
12.5°	646.0	643.1	652.5	671.2	698.2	717.7	742.4	744.2	746.5	749.8	753.1
15°	592.9	596.2	603.5	623.2	651.5	679.0	711.2	713.0	717.7	720.5	725.2
17.5°	556.6	556.6	565.0	583.1	609.7	644.6	685.1	688.3	692.1	695.8	700.9
20°	538.4	538.4	541.7	552.4	575.6	609.2	658.1	661.8	668.3	672.5	679.5
22.5°	536.9	536.5	536.0	538.4	552.4	578.5	629.2	634.3	640.0	646.4	652.5
25°	551.9	553.3	547.7	544.0	545.3	557.5	601.7	604.6	615.2	619.4	626.9
27.5°	573.4	575.6	571.0	565.4	557.0	549.1	578.5	583.1	590.0	597.1	606.4
30°	604.1	603.5	603.1	599.4	583.1	558.4	571.4	574.7	580.7	586.4	594.2
32.5°	637.1	640.9	643.6	641.8	625.0	583.1	581.2	584.0	589.6	592.9	598.0
35°	680.0	681.8	692.5	692.5	675.8	627.4	608.8	611.0	613.9	615.2	619.0
37.5°	727.0	733.6	749.4	758.7	732.6	682.3	652.0	652.0	653.5	654.4	656.7
40°	781.5	790.8	812.7	830.4	813.7	750.7	708.8	713.0	711.7	709.8	714.9
42.5°	844.9	855.1	881.7	898.4	888.6	833.2	785.2	782.5	786.6	781.0	782.9
45°	918.4	926.4	953.4	971.1	979.0	934.3	885.4	879.7	879.7	867.7	872.8
47.5°	984.6	986.8	1012.9	1044.1	1069.8	1070.7	1001.8	998.1	989.2	981.3	979.5
50°	1046.1	1053.0	1069.8	1103.8	1157.4	1203.9	1162.0	1150.4	1140.6	1111.2	1120.1
52.5°	1152.7	1166.2	1176.9	1197.4	1260.8	1355.3	1407.0	1388.9	1386.5	1359.9	1353.9
55°	1172.7	1174.1	1209.5	1327.8	1476.8	1544.9	1644.1	1643.6	1651.0	1642.7	1634.7
57.5°	1078.6	1067.4	1126.6	1282.7	1582.1	1931.4	1901.2	1904.4	1894.6	1869.0	1861.1
60°	840.1	849.5	913.3	1112.2	1506.2	2181.0	2380.8	2321.7	2364.0	2297.4	2261.6
62.5°	472.7	462.0	505.3	714.4	1235.6	2194.0	3034.3	3040.8	3061.3	3024.0	2936.5
65°	305.0	300.4	296.2	361.4	740.5	1919.3	3395.7	3475.8	3523.8	3543.3	3544.7
66°	262.2	258.5	253.4	295.7	516.1	1691.0	3372.4	3458.1	3534.5	3570.8	3581.5
67.5°	223.1	217.5	216.6	245.0	359.1	1311.9	3150.2	3284.8	3352.3	3446.4	3497.7
70°	170.4	167.7	176.0	211.4	275.7	617.6	2510.3	2685.9	2802.3	2875.9	2923.4
72.5°	143.0	142.1	153.6	193.2	261.3	350.3	1757.2	1945.9	2067.4	2137.8	2202.9
75°	111.8	112.7	128.1	184.4	259.8	305.0	1020.9	1200.6	1271.4	1382.3	1467.0
77.5°	83.9	82.9	95.0	149.0	253.4	309.2	530.5	605.0	682.7	739.1	759.6
80°	58.7	59.6	68.0	102.5	197.4	318.1	330.7	347.9	364.2	382.4	386.1
82.5°	39.1	39.6	50.3	70.3	137.0	303.6	308.8	300.8	288.3	272.4	255.2
85°	23.7	24.7	35.9	47.5	106.2	274.8	319.5	298.5	279.5	258.5	237.5
87.5°	12.1	13.5	21.4	27.9	62.9	135.5	332.6	317.1	291.1	258.9	235.7
90°	3.3	3.3	4.7	7.0	12.6	27.5	83.9	75.5	37.7	71.7	35.4
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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: IST-AF-450-LED-E1-SL3

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3
2.5°	837.9	838.8	837.9	836.5	837.9	836.5	836.0	835.5	836.0	835.0	834.6
5°	833.7	834.6	834.6	831.8	831.4	833.2	830.4	831.4	830.4	829.5	827.6
7.5°	813.7	814.1	814.6	812.7	814.1	814.1	813.1	813.1	812.2	812.7	810.9
10°	785.7	787.6	789.4	788.5	788.0	792.2	790.3	791.8	791.8	790.3	790.8
12.5°	755.4	758.7	761.0	761.0	762.9	767.5	767.1	768.0	771.7	771.7	770.3
15°	727.5	730.7	734.5	737.2	741.0	744.2	746.5	750.3	752.2	752.2	754.5
17.5°	705.6	710.2	714.4	715.9	721.0	726.5	727.9	732.6	735.4	736.8	739.6
20°	684.1	689.3	694.4	699.1	703.7	710.2	713.5	716.3	721.0	723.7	727.9
22.5°	659.0	667.0	673.4	679.0	686.9	692.5	699.1	703.7	709.3	713.5	716.8
25°	635.3	646.0	654.8	660.4	671.2	679.0	686.9	694.0	700.9	707.0	711.7
27.5°	613.4	625.4	636.2	645.1	656.7	669.2	677.2	688.9	698.2	706.6	712.1
30°	602.6	613.0	624.1	634.3	646.0	661.8	674.8	689.8	701.4	712.1	720.5
32.5°	605.0	614.3	624.1	632.9	645.1	662.8	676.3	693.5	710.7	724.7	735.4
35°	623.6	632.0	638.5	646.4	657.1	670.6	685.1	703.3	724.7	743.3	757.3
37.5°	662.8	665.0	671.6	677.6	683.2	695.8	709.3	724.7	749.4	769.0	788.5
40°	711.2	717.2	723.3	726.1	732.6	740.5	746.5	762.9	784.8	810.4	831.8
42.5°	783.4	785.7	786.6	787.6	789.9	795.4	804.3	819.2	840.7	863.5	887.2
45°	864.4	867.2	870.0	871.3	868.2	871.3	880.7	887.7	908.7	930.1	960.3
47.5°	976.6	968.2	964.0	969.7	966.9	973.8	978.0	982.2	1007.4	1033.0	1058.7
50°	1120.5	1115.4	1108.9	1109.4	1114.5	1109.8	1112.7	1128.0	1136.4	1157.8	1191.8
52.5°	1350.6	1334.7	1310.1	1299.4	1305.5	1301.7	1303.1	1306.4	1300.8	1320.8	1349.7
55°	1634.7	1614.2	1598.0	1588.6	1554.2	1551.4	1528.5	1520.1	1502.0	1521.1	1514.6
57.5°	1837.3	1824.3	1815.9	1787.9	1772.2	1740.4	1731.1	1720.0	1694.8	1707.4	1718.6
60°	2228.5	2182.0	2166.1	2117.2	2100.9	2070.7	2032.0	2012.9	1999.9	2011.9	2004.5
62.5°	2881.4	2816.8	2804.2	2688.2	2659.8	2589.9	2517.3	2507.6	2466.5	2440.9	2434.8
65°	3519.1	3426.4	3357.0	3230.4	3144.7	3045.0	2934.1	2853.1	2769.7	2727.8	2672.4
66°	3566.6	3529.8	3459.9	3385.9	3261.1	3152.1	3026.3	2938.7	2845.1	2771.6	2724.1
67.5°	3485.6	3466.0	3441.3	3391.0	3312.7	3211.2	3092.0	2980.3	2867.5	2780.9	2705.0
70°	2946.2	2967.7	2995.6	2982.5	2937.8	2898.2	2793.0	2730.6	2645.9	2532.2	2485.7
72.5°	2223.9	2281.2	2261.6	2188.0	2153.5	2126.1	2087.8	2046.0	1924.4	1910.5	1855.5
75°	1430.7	1411.7	1424.3	1334.7	1273.8	1248.6	1157.8	1120.5	1029.3	970.2	925.0
77.5°	754.0	716.8	687.9	609.2	552.8	519.8	475.5	423.4	343.2	338.6	265.5
80°	349.7	321.3	295.3	267.8	240.3	204.0	177.0	144.3	127.6	109.5	102.0
82.5°	237.5	219.3	203.6	185.4	164.4	139.2	120.2	102.0	87.1	78.3	71.3
85°	215.1	195.6	177.9	155.1	133.2	112.2	91.8	75.9	62.0	54.0	49.4
87.5°	209.1	184.8	166.2	141.6	120.2	98.7	79.2	61.5	48.0	39.1	33.6
90°	26.6	28.4	20.5	19.5	8.4	10.7	7.9	4.7	5.1	3.7	4.2
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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P227005

CATALOG NUMBER: IST-AF-450-LED-E1-SL3

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P227005

CATALOG NUMBER: IST-AF-450-LED-E1-SL3

CANDELA DISTRIBUTION (continued):

	71°	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°
0°	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3
2.5°	833.7	832.3	833.7	833.2	831.4	831.8	832.3	830.4	829.5	829.5	829.0
5°	826.2	825.3	826.2	825.7	823.0	822.5	822.5	821.1	819.2	817.8	816.9
7.5°	808.5	809.5	808.9	807.6	806.2	806.2	804.8	801.5	799.6	797.8	796.0
10°	788.5	788.5	789.0	788.5	786.1	785.2	783.4	781.5	781.9	777.3	773.6
12.5°	770.8	770.8	770.3	769.4	768.0	767.5	767.5	761.9	760.6	759.1	754.9
15°	754.0	754.9	754.9	754.9	752.6	752.6	750.3	746.5	746.5	742.4	738.2
17.5°	741.0	742.4	741.9	742.4	742.9	740.0	735.8	733.6	730.7	728.4	722.8
20°	729.8	730.7	731.2	731.2	729.8	727.9	724.2	720.5	718.6	714.0	707.0
22.5°	719.5	721.4	721.9	721.9	720.1	718.6	714.9	709.3	705.6	700.0	693.5
25°	715.3	717.7	716.3	717.2	715.3	712.1	707.0	702.4	696.7	689.8	682.7
27.5°	716.8	720.1	719.1	718.6	716.3	714.0	707.5	701.8	695.3	686.9	678.1
30°	725.2	730.7	728.4	726.5	726.1	720.5	714.4	706.6	699.1	689.3	679.0
32.5°	741.0	743.8	744.2	742.9	740.5	735.8	727.5	717.2	708.8	697.2	685.1
35°	767.1	769.9	769.0	769.0	766.6	759.1	748.9	738.7	727.0	714.0	701.4
37.5°	803.4	808.5	807.6	805.7	802.9	794.1	786.1	773.6	760.6	743.3	728.9
40°	849.0	856.9	864.0	862.6	856.0	848.1	840.7	826.2	813.1	794.1	778.3
42.5°	910.5	921.3	930.1	936.6	933.7	923.5	910.5	904.5	885.9	866.2	850.0
45°	989.2	1011.6	1019.5	1027.5	1027.5	1020.9	1018.1	1006.0	986.4	960.3	945.0
47.5°	1093.1	1122.9	1131.7	1145.2	1153.2	1146.2	1141.0	1120.5	1107.5	1071.6	1068.0
50°	1219.3	1249.1	1273.3	1289.1	1286.9	1292.9	1280.7	1269.2	1251.0	1221.6	1211.4
52.5°	1380.5	1404.2	1426.1	1435.4	1445.1	1443.8	1441.0	1433.1	1410.2	1394.4	1368.3
55°	1545.8	1565.3	1591.9	1607.3	1619.8	1617.5	1606.7	1587.7	1591.9	1558.8	1544.3
57.5°	1733.9	1755.4	1784.2	1798.7	1804.3	1832.6	1825.7	1823.3	1815.4	1803.8	1788.8
60°	2057.6	2063.7	2087.4	2123.7	2168.5	2159.7	2170.8	2178.3	2183.8	2157.7	2155.9
62.5°	2443.2	2450.7	2471.1	2478.6	2485.2	2486.1	2471.1	2471.1	2445.6	2412.0	2385.9
65°	2653.7	2638.4	2624.4	2616.5	2599.2	2583.9	2561.6	2531.3	2487.9	2436.3	2389.7
66°	2684.0	2652.8	2634.6	2614.7	2587.1	2558.7	2532.2	2490.8	2439.9	2378.5	2317.0
67.5°	2654.7	2611.8	2569.4	2540.1	2501.9	2450.7	2404.1	2355.7	2307.7	2223.4	2166.1
70°	2386.9	2335.7	2289.1	2224.8	2164.3	2113.9	2033.8	1949.5	1880.2	1791.7	1735.3
72.5°	1772.6	1712.0	1651.5	1561.1	1473.2	1460.1	1359.5	1260.3	1207.2	1135.9	1078.6
75°	875.5	799.2	690.7	642.2	571.9	537.5	518.3	446.6	429.4	359.1	358.1
77.5°	247.3	212.4	188.6	164.4	154.2	146.7	121.1	116.0	105.3	103.4	97.4
80°	93.6	88.5	86.1	83.9	81.5	80.1	79.2	75.5	73.6	70.8	69.4
82.5°	67.5	65.7	61.5	60.0	58.2	55.4	54.9	52.6	51.2	48.4	47.5
85°	45.6	43.3	41.0	38.7	37.7	37.2	35.9	34.9	34.0	32.6	32.1
87.5°	30.7	28.4	25.6	24.7	24.2	24.7	25.2	24.2	23.7	22.8	22.4
90°	3.7	5.1	4.7	4.7	5.6	4.7	4.7	5.1	4.7	4.7	4.2
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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P227005
 CATALOG NUMBER: IST-AF-450-LED-E1-SL3

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	71°	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5°
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5°
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5°
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10°
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5°
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15°
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5°
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20°
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5°
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25°
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5°
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30°
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5°
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35°
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5°
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40°
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5°
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45°
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5°
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50°
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5°
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55°
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.5°
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60°
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5°
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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: P227005
 NUMBER: IST-AF-450-LED-E1-SL3

REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

82°	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	110°	82°
825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	825.3	110°	0.0
828.1	826.6	827.2	825.3	824.8	825.7	826.2	826.2	824.8	816.4	806.7	112.5°	0.0
816.0	813.1	812.7	811.3	808.9	811.8	810.4	808.0	805.3	795.4	776.4	115°	0.0
793.6	791.8	789.4	787.6	786.1	785.2	784.8	782.5	777.3	759.1	727.0	117.5°	0.0
772.2	769.9	767.1	762.9	761.0	758.2	758.2	752.6	748.9	726.1	678.5	120°	0.0
751.3	747.1	745.6	742.9	737.8	735.4	732.1	726.5	721.0	693.5	631.1	122.5°	0.0
735.4	731.2	725.2	723.3	717.7	712.6	708.4	700.9	694.9	658.6	581.2	125°	0.0
718.1	714.9	708.4	704.2	698.2	692.1	685.1	675.8	671.6	625.4	533.8	127.5°	0.0
704.2	696.7	689.3	685.6	678.1	671.2	664.1	652.9	644.6	592.9	483.4	130°	0.0
687.9	681.4	673.4	667.0	656.7	648.8	640.9	629.2	619.0	559.9	432.7	132.5°	0.0
676.7	667.4	659.0	651.5	640.0	630.6	619.4	606.8	596.6	528.1	376.8	135°	0.0
670.2	660.8	650.2	640.9	627.4	616.6	604.6	590.5	577.6	502.6	324.2	137.5°	0.0
668.3	657.1	646.0	634.3	620.3	606.8	592.4	578.5	561.7	477.8	266.9	140°	0.0
673.9	660.4	647.8	633.8	617.6	602.2	587.8	569.6	552.8	456.4	210.5	142.5°	0.0
689.3	673.0	658.6	643.1	624.5	607.7	590.5	570.1	551.5	441.5	161.1	145°	0.0
713.5	698.2	681.4	666.0	644.6	625.9	606.8	584.9	562.6	435.5	121.5	147.5°	0.0
762.4	741.9	724.7	708.4	683.7	664.6	642.7	616.1	591.1	441.1	101.6	150°	0.0
830.8	805.3	789.4	775.0	744.2	723.3	698.2	667.9	639.4	456.8	89.4	152.5°	0.0
925.5	905.8	877.5	855.1	823.9	800.6	772.6	736.3	704.6	479.3	83.4	155°	0.0
1043.7	1018.1	990.1	967.3	933.3	892.8	863.5	819.7	783.8	514.1	80.6	157.5°	0.0
1188.6	1157.8	1120.1	1101.0	1053.9	1022.2	983.2	936.1	890.5	568.1	81.9	160°	0.0
1346.0	1312.9	1283.6	1247.3	1204.4	1169.0	1131.7	1081.9	1024.6	670.6	87.6	162.5°	0.0
1512.2	1490.8	1462.8	1415.9	1392.5	1347.8	1300.4	1245.3	1203.9	803.8	101.1	165°	0.0
1754.5	1731.1	1727.9	1681.7	1646.3	1605.8	1568.6	1523.0	1474.1	1040.4	132.8	167.5°	0.0
2127.0	2102.8	2075.3	2039.5	1997.5	1947.2	1901.2	1839.7	1785.2	1277.5	147.6	170°	0.0
2347.8	2303.1	2253.7	2199.2	2138.2	2075.8	2013.9	1935.1	1855.9	1292.0	133.2	172.5°	0.0
2329.2	2273.7	2210.8	2136.7	2072.5	1995.7	1929.1	1827.5	1755.4	1150.4	108.5	175°	0.0
2260.2	2184.3	2125.2	2057.2	1976.5	1907.6	1837.3	1737.2	1654.7	1054.9	99.2	177.5°	0.0
2083.6	2019.0	1937.0	1871.8	1812.2	1729.7	1663.6	1570.0	1513.1	914.7	89.0	180°	0.0
1665.5	1576.1	1506.6	1455.9	1388.3	1313.9	1255.2	1176.4	1126.2	605.5	76.8		
970.2	947.8	870.0	826.2	785.2	724.7	678.1	640.4	574.3	293.4	68.0		
299.0	278.0	275.3	233.8	247.3	211.4	205.8	187.2	187.2	112.7	53.6		
95.4	93.6	89.9	84.8	82.9	82.9	80.6	80.1	76.4	60.6	40.1		
67.5	66.2	64.8	63.3	62.4	62.9	61.0	60.0	59.1	43.8	31.7		
46.5	45.2	42.4	42.4	41.4	41.0	41.4	39.6	39.1	30.7	26.6		
31.7	31.2	30.7	30.3	29.8	29.4	28.8	27.5	26.6	21.4	18.6		
21.0	17.7	17.2	14.9	14.4	14.0	13.0	14.0	15.3	15.3	12.1		
4.7	4.2	4.7	4.7	3.7	4.2	4.2	3.3	3.3	4.7	4.2		
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	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	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	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		

'227005
 IST-AF-450-LED-E1-SL3

REPORT NUMBER: P227005
 CATALOG NUMBER: IST-AF-450

TION (continued):

CANDELA DISTRIBUTION (con

83°	84°	85°	86°	87°	88°	89°	90°	95°	105°		115°	125°
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0°	825.3	825.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5°	798.3	790.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5°	755.9	739.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5°	698.6	666.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10°	632.9	585.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5°	565.0	504.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15°	501.6	422.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5°	435.0	336.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20°	371.2	254.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5°	299.0	178.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25°	219.3	129.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5°	156.5	103.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30°	116.9	87.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5°	93.6	75.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35°	79.7	68.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5°	71.3	63.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40°	66.6	61.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5°	63.8	59.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45°	62.4	57.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5°	61.5	55.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50°	60.6	55.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5°	61.0	56.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55°	63.3	56.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.5°	67.1	56.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60°	69.9	57.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5°	70.8	59.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°	69.9	60.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66°	68.9	60.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.5°	67.5	59.6
										70°	64.2	55.9
										72.5°	57.8	50.3
										75°	49.4	40.5
										77.5°	40.1	32.6
										80°	29.8	24.7
										82.5°	21.9	19.1
										85°	15.3	13.5
										87.5°	9.3	8.4
										90°	2.4	2.4
										92.5°	0.0	0.0
										95°	0.0	0.0
										97.5°	0.0	0.0
										100°	0.0	0.0
										102.5°	0.0	0.0
										105°	0.0	0.0
										107.5°	0.0	0.0



REPORT NUMBER: P227005

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

0-LED-E1-SL3

tinued):

135°	145°	155°	165°	175°	180°
825.3	825.3	825.3	825.3	825.3	825.3
785.7	785.2	773.6	771.3	763.3	767.5
719.1	711.2	690.2	686.0	677.2	674.8
639.4	617.6	600.8	582.2	564.5	573.4
546.3	509.5	472.7	448.5	438.7	435.5
457.8	391.7	345.6	298.1	281.3	287.3
350.7	275.3	213.8	186.3	170.4	167.7
247.3	176.6	148.1	141.2	137.9	137.9
167.7	134.6	123.9	120.6	120.6	121.1
127.6	113.1	108.5	108.9	110.9	111.3
105.7	100.1	97.8	101.1	104.8	105.3
91.2	89.9	90.3	94.5	98.3	98.7
80.1	81.5	83.4	87.1	90.3	91.2
72.2	74.5	75.9	78.3	80.1	80.6
66.6	69.4	68.9	70.3	71.7	72.2
63.3	64.8	63.3	64.2	64.2	65.2
60.6	61.0	58.7	59.1	60.0	60.0
57.8	57.3	54.9	55.9	57.3	57.8
54.9	54.0	52.2	54.0	56.4	56.8
52.6	51.7	50.7	53.1	55.9	56.4
51.7	50.7	49.8	53.1	55.9	56.4
51.7	50.7	49.8	52.2	54.9	55.4
52.2	51.2	49.4	51.7	53.6	54.0
52.6	51.7	48.4	49.8	50.7	51.2
52.6	50.7	47.5	48.0	48.0	48.4
51.7	49.4	45.6	45.6	45.2	45.2
51.7	47.5	43.8	42.9	41.9	41.9
51.2	47.1	43.3	41.9	40.5	40.5
50.3	46.1	42.4	40.5	39.1	39.1
47.1	44.3	40.1	38.2	36.8	36.3
41.9	40.5	37.2	35.9	34.5	34.0
35.4	35.9	34.0	33.0	31.7	31.2
29.8	30.7	29.8	29.4	28.4	27.9
23.7	25.6	24.7	24.7	25.2	24.2
18.2	20.5	19.5	20.5	21.4	20.0
12.6	14.9	14.9	15.3	15.9	14.9
7.9	9.8	9.3	9.8	9.8	9.3
1.8	3.3	1.8	2.8	2.4	1.8
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
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

CANDELA DISTRIBUTION (continued):

	115°	125°	135°
110°	0.0	0.0	0.0
112.5°	0.0	0.0	0.0
115°	0.0	0.0	0.0
117.5°	0.0	0.0	0.0
120°	0.0	0.0	0.0
122.5°	0.0	0.0	0.0
125°	0.0	0.0	0.0
127.5°	0.0	0.0	0.0
130°	0.0	0.0	0.0
132.5°	0.0	0.0	0.0
135°	0.0	0.0	0.0
137.5°	0.0	0.0	0.0
140°	0.0	0.0	0.0
142.5°	0.0	0.0	0.0
145°	0.0	0.0	0.0
147.5°	0.0	0.0	0.0
150°	0.0	0.0	0.0
152.5°	0.0	0.0	0.0
155°	0.0	0.0	0.0
157.5°	0.0	0.0	0.0
160°	0.0	0.0	0.0
162.5°	0.0	0.0	0.0
165°	0.0	0.0	0.0
167.5°	0.0	0.0	0.0
170°	0.0	0.0	0.0
172.5°	0.0	0.0	0.0
175°	0.0	0.0	0.0
177.5°	0.0	0.0	0.0
180°	0.0	0.0	0.0

