

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: P227237

Luminaire Tested: **IST-AF-450-LED-E1-SLL-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227237
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35948)
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-SLL-8030
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-90° SPILL LIGHT ELIMINATOR LEFT
Light Source: (16) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2207.4 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U1 - G1

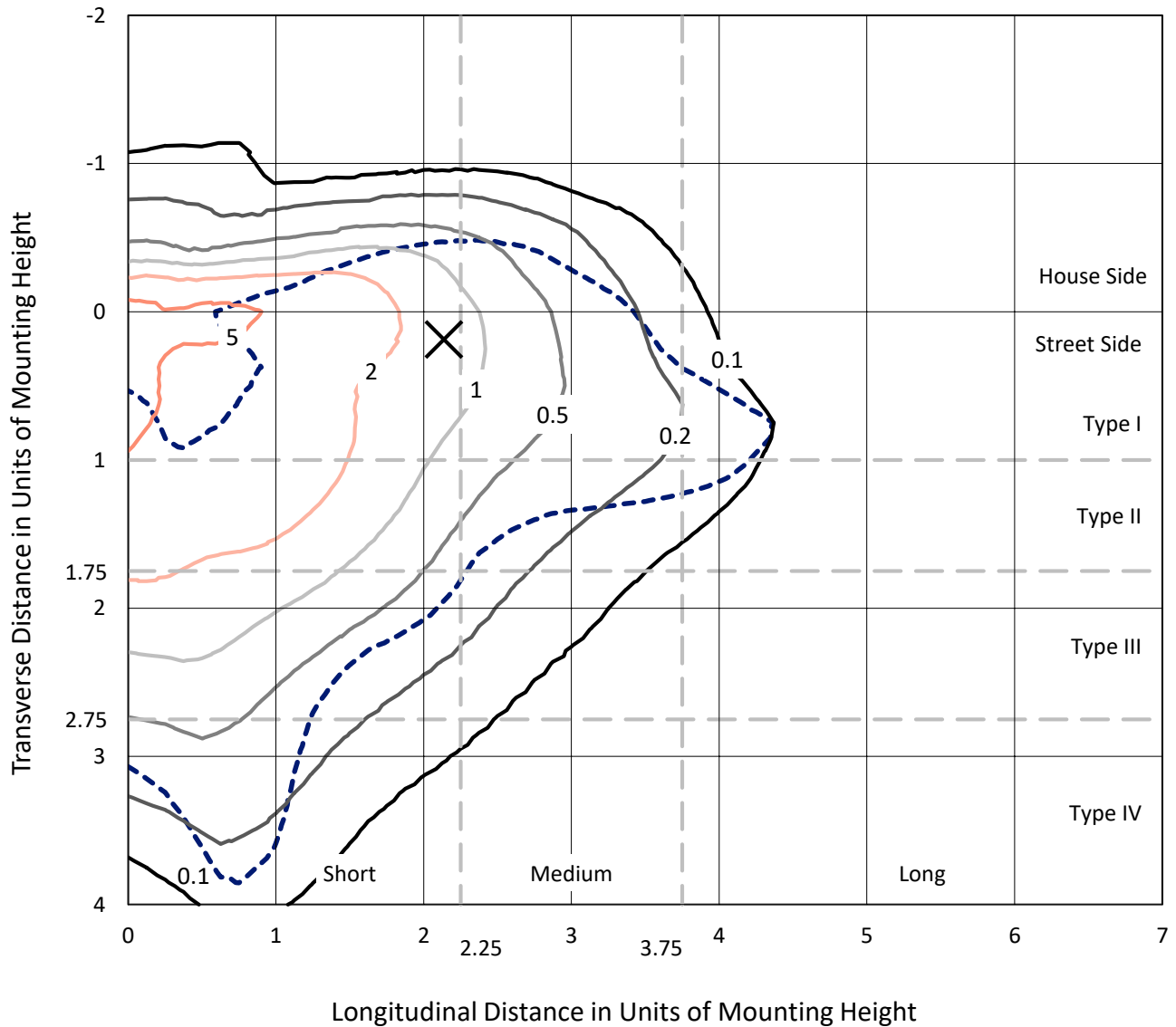
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

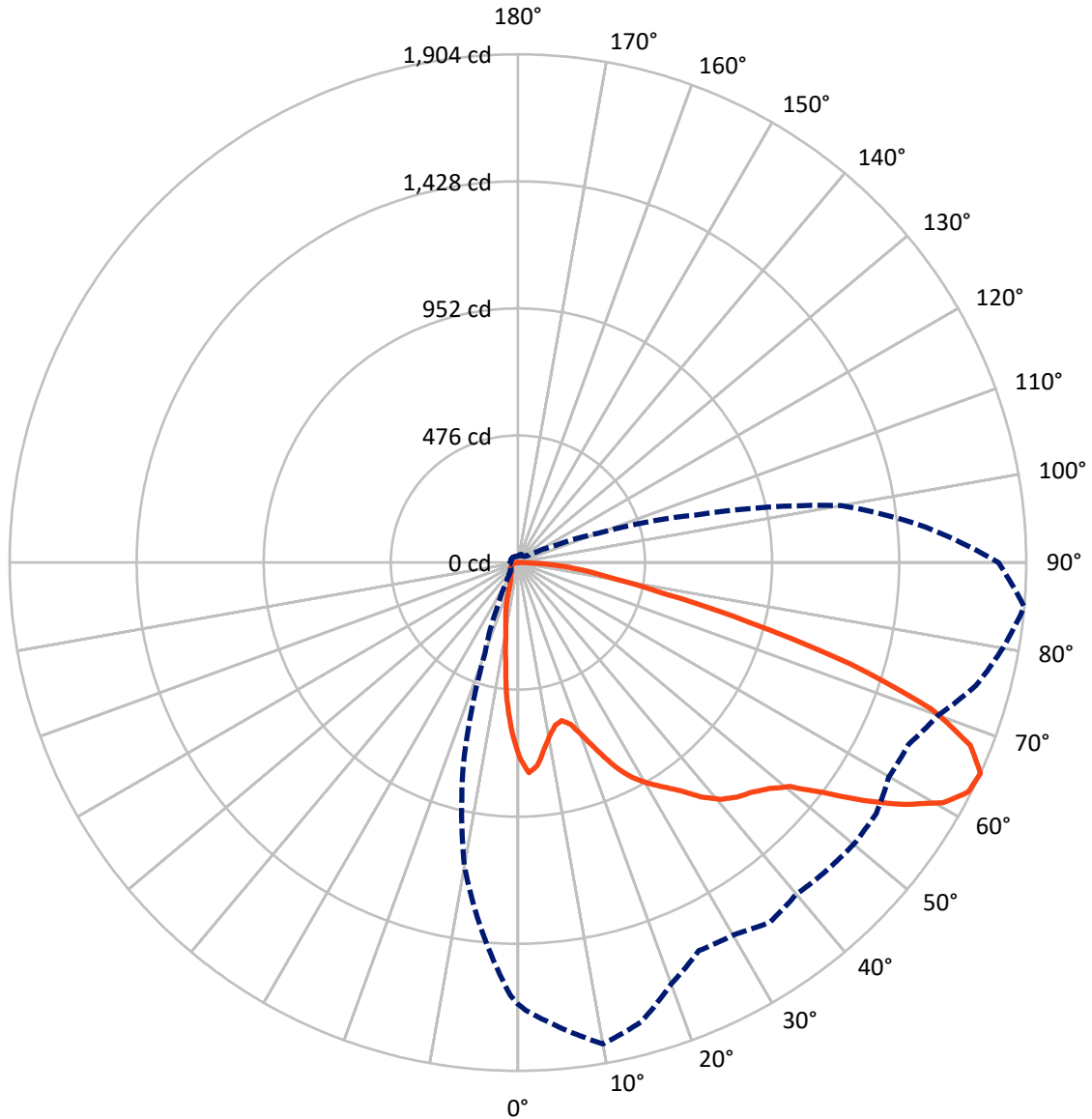
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	378.6	0.0	378.6
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	1828.7	0.1	1828.7
	% Fixture	82.8	0.0	82.8
Total	Lumens	2207.3	0.1	2207.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.0	2.4
10°-20°	104.0	4.7
20°-30°	148.2	6.7
30°-40°	215.0	9.7
40°-50°	307.6	13.9
50°-60°	472.3	21.4
60°-70°	546.7	24.8
70°-80°	278.9	12.6
80°-90°	80.5	3.6
90°-100°	0.1	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°	2207.3	100.0
0°-180°	2207.4	100.0



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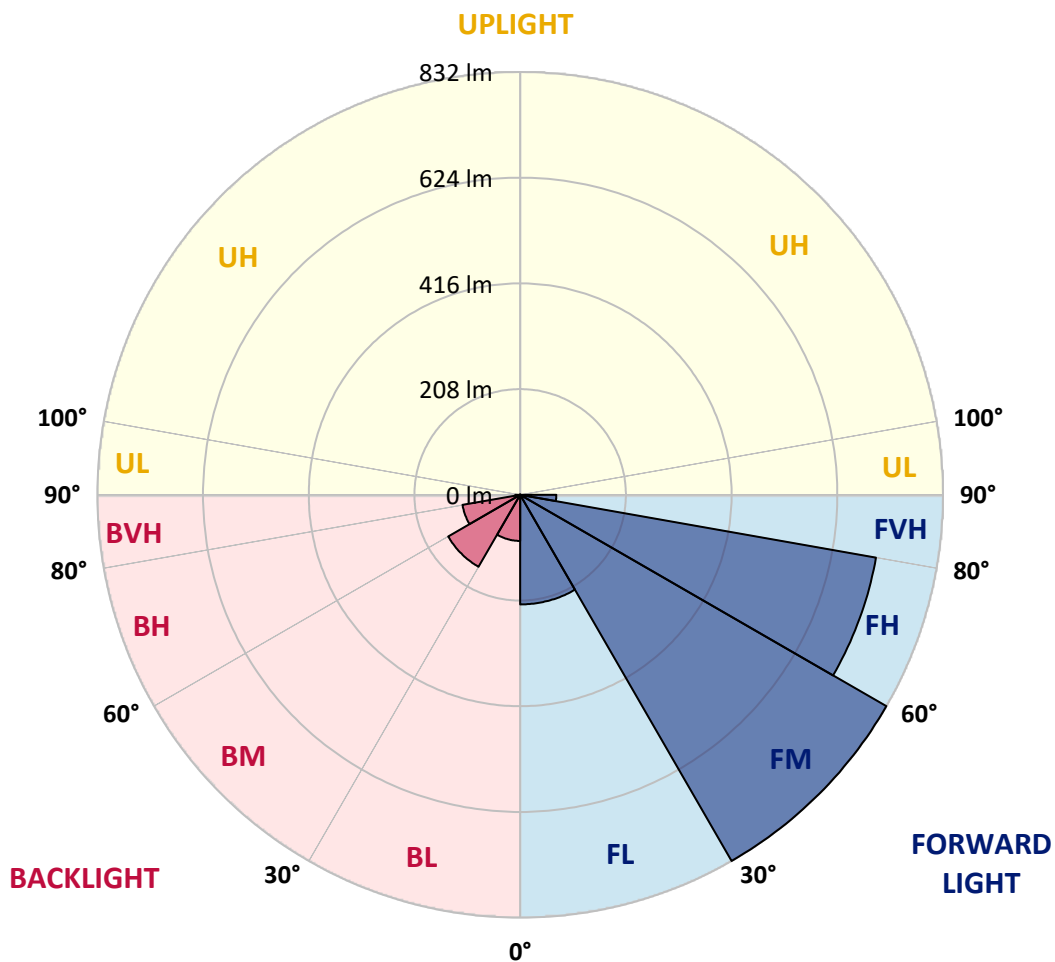
CATALOG NUMBER: IST-AF-450-LED-E1-SLL-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	215.6	9.8			
FM	(30°-60°)	831.5	37.7			
FH	(60°-80°)	710.4	32.2			G1/1800
FVH	(80°-90°)	71.1	3.2			G1/100
BL	(0°-30°)	90.6	4.1	B0/110		
BM	(30°-60°)	163.5	7.4	B0/220		
BH	(60°-80°)	115.2	5.2	B1/500		G1/500
BVH	(80°-90°)	9.4	0.4			G0/10
UL	(90°-100°)	0.1	0.0		U1/10	
UH	(100°-180°)	0.0	0.0		U1/10	

BUG Rating: B1-U1-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	10°	15°	20°	25°	30°	35°	40°	45°
0°	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2
2.5°	754.9	755.6	766.0	776.0	788.7	786.8	797.2	805.0	812.1	813.2	818.4
5°	708.8	716.2	739.6	759.7	785.0	804.6	825.8	842.5	854.8	866.3	867.8
7.5°	644.2	649.7	676.9	708.4	744.8	770.8	802.8	830.7	850.3	868.9	873.0
10°	588.8	594.0	624.1	665.0	696.9	730.7	763.8	786.4	812.1	828.1	835.9
12.5°	562.1	568.4	597.0	634.1	666.8	699.5	724.4	744.1	758.6	761.6	763.8
15°	572.5	575.8	607.4	640.4	666.5	682.8	689.5	701.4	700.3	706.2	707.3
17.5°	614.4	613.0	646.4	669.4	682.1	680.2	669.8	663.5	652.3	649.0	658.7
20°	686.5	691.7	713.3	727.4	714.4	684.3	655.7	636.0	620.4	615.2	614.1
22.5°	770.8	777.5	800.9	793.5	760.4	705.5	653.4	621.9	602.6	597.0	594.8
25°	859.3	863.7	875.6	850.3	803.9	732.6	669.1	624.8	599.2	591.0	589.9
27.5°	930.6	935.0	929.5	900.5	833.3	763.0	690.6	638.2	604.8	596.6	592.9
30°	988.9	991.1	972.6	936.5	869.7	796.8	718.8	661.6	622.6	604.0	601.4
32.5°	1054.3	1052.8	1016.8	967.0	900.5	827.3	751.2	688.0	639.7	617.0	613.0
35°	1126.0	1113.0	1049.5	997.1	921.7	850.7	780.5	715.9	667.2	637.1	631.9
37.5°	1189.9	1176.5	1091.4	1020.9	942.8	868.9	803.5	751.9	709.2	681.7	679.5
40°	1239.7	1223.3	1123.4	1036.8	953.2	882.3	830.7	797.2	769.0	746.7	746.7
42.5°	1279.8	1261.9	1154.6	1055.4	962.5	902.7	876.0	864.5	858.5	846.3	850.7
45°	1318.4	1300.2	1180.2	1067.3	983.3	942.5	946.2	956.2	974.0	967.0	973.3
47.5°	1355.2	1337.4	1209.2	1086.2	1023.5	1013.8	1033.1	1073.2	1108.2	1135.6	1155.0
50°	1416.9	1395.7	1261.2	1142.0	1086.6	1091.4	1147.2	1225.9	1282.8	1308.0	1306.5
52.5°	1533.9	1503.8	1373.0	1246.0	1176.9	1203.6	1269.4	1368.6	1442.9	1462.6	1470.4
55°	1676.9	1653.1	1534.6	1383.8	1333.6	1342.9	1424.7	1536.9	1594.1	1614.5	1621.2
57.5°	1760.9	1754.5	1680.2	1531.3	1482.6	1478.9	1585.5	1677.3	1726.7	1746.0	1740.1
59°	1780.5	1782.4	1740.1	1635.7	1568.8	1560.6	1669.1	1754.2	1795.4	1801.4	1798.4
60°	1778.7	1789.1	1783.9	1692.9	1623.4	1613.0	1704.4	1785.4	1819.9	1829.2	1818.8
62.5°	1740.4	1758.3	1807.7	1798.0	1747.1	1694.0	1737.1	1795.8	1818.1	1809.2	1801.4
65°	1653.5	1676.9	1745.6	1831.1	1782.0	1679.5	1604.1	1610.8	1644.6	1622.3	1633.1
67.5°	1503.4	1530.2	1566.6	1760.5	1689.2	1517.2	1387.5	1324.0	1308.0	1329.6	1363.7
70°	1222.9	1240.4	1332.5	1606.7	1483.4	1247.1	1084.4	999.7	971.4	1021.2	1056.1
72.5°	862.6	888.6	1010.1	1329.6	1220.3	998.9	820.6	742.6	714.4	716.6	747.1
75°	524.9	560.2	705.8	1051.3	961.8	765.3	625.2	569.1	560.6	555.7	550.5
77.5°	346.2	359.6	464.0	725.5	648.6	544.2	469.2	492.2	517.9	523.4	530.1
80°	234.8	238.9	300.9	508.9	427.2	402.0	379.3	433.5	482.2	491.1	486.3
82.5°	144.5	156.8	209.9	343.3	340.7	328.8	299.8	342.1	374.5	380.0	390.1
85°	50.2	52.4	128.9	303.1	346.2	349.9	247.0	195.0	219.2	215.1	154.5
87.5°	21.5	24.1	40.1	202.8	234.4	193.9	112.9	100.3	77.3	43.5	42.0
90°	1.5	1.5	1.1	1.9	5.6	3.7	3.3	1.1	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°	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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CANDELA DISTRIBUTION (continued):

	0°	1°	5°	10°	15°	20°	25°	30°	35°	40°	45°
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2
2.5°	817.3	812.4	815.4	811.3	804.6	800.2	795.0	788.3	780.5	770.1	759.7
5°	864.5	860.7	851.5	838.1	819.5	803.9	785.3	763.4	745.2	721.8	699.9
7.5°	868.5	862.6	845.5	820.6	792.0	763.0	741.1	705.5	682.4	645.3	620.4
10°	831.4	831.8	814.7	791.3	761.6	727.4	695.8	656.8	623.0	585.1	543.5
12.5°	776.8	782.0	782.7	761.9	732.9	696.9	661.6	624.5	582.5	542.0	503.7
15°	714.7	729.6	730.7	725.5	710.3	679.8	647.5	614.1	571.4	527.1	484.1
17.5°	659.4	673.5	686.5	698.4	699.1	684.7	665.0	636.4	593.6	541.6	491.1
20°	617.4	632.6	654.9	676.9	701.0	708.4	709.9	691.7	646.0	582.5	514.1
22.5°	600.0	617.8	640.4	681.7	724.4	750.8	765.6	765.6	717.7	643.4	552.0
25°	596.2	610.7	645.3	696.5	753.8	799.8	828.1	847.0	812.4	721.8	598.8
27.5°	598.8	618.5	661.3	713.6	773.4	832.5	878.9	912.0	879.7	775.3	642.3
30°	609.2	638.6	682.8	737.0	798.7	861.1	917.2	959.2	935.4	824.0	683.5
32.5°	627.4	663.1	713.3	762.3	823.6	891.2	946.6	1001.9	984.4	857.8	705.5
35°	654.6	696.5	742.2	791.6	850.3	918.0	977.0	1049.5	1043.1	900.1	727.4
37.5°	698.4	741.5	783.5	825.8	881.5	947.3	1020.9	1113.4	1108.2	962.9	762.7
40°	775.7	800.9	832.1	859.3	911.6	974.4	1053.2	1166.1	1184.7	1016.8	793.9
42.5°	871.5	886.4	895.3	902.7	929.5	988.5	1076.6	1201.4	1231.9	1056.9	818.0
45°	993.7	989.3	971.4	954.4	951.4	996.7	1087.3	1227.4	1269.0	1095.9	842.5
47.5°	1138.2	1128.6	1079.9	1023.8	992.6	1011.6	1106.3	1265.7	1314.7	1147.2	873.0
50°	1305.0	1282.4	1202.9	1108.2	1050.6	1053.5	1154.2	1318.8	1374.9	1214.0	929.8
52.5°	1459.6	1419.1	1324.4	1199.2	1116.7	1126.7	1240.4	1428.7	1498.2	1324.7	1025.3
55°	1595.9	1543.9	1441.8	1304.7	1230.0	1247.5	1378.2	1574.4	1640.1	1456.6	1121.9
57.5°	1711.8	1656.5	1555.8	1435.1	1342.2	1356.7	1501.2	1709.6	1753.8	1575.1	1214.4
59°	1764.6	1710.0	1617.1	1505.6	1418.7	1449.2	1588.1	1776.8	1795.8	1620.8	1249.7
60°	1790.2	1735.6	1653.9	1545.0	1465.5	1505.6	1634.2	1827.7	1811.4	1627.5	1263.1
62.5°	1788.4	1750.1	1696.2	1621.9	1607.4	1674.3	1783.9	1893.1	1822.2	1608.2	1271.6
65°	1641.6	1638.3	1604.8	1613.4	1673.9	1777.2	1844.4	1903.9	1799.9	1531.3	1230.4
67.5°	1369.3	1383.1	1387.5	1439.9	1581.4	1756.8	1815.8	1827.4	1702.9	1366.7	1102.2
70°	1057.3	1026.8	1076.9	1169.4	1373.4	1599.3	1683.2	1643.1	1504.5	1144.6	900.1
72.5°	748.6	757.5	829.5	949.5	1157.2	1391.2	1522.7	1303.9	1131.9	856.7	638.2
75°	563.2	605.2	640.1	745.2	939.9	1191.7	1300.2	896.4	737.4	590.7	417.6
77.5°	539.8	536.4	509.7	532.0	677.6	834.7	927.6	559.5	461.8	386.3	252.2
80°	498.9	470.3	421.6	400.1	426.8	536.1	588.8	359.6	307.2	270.1	142.3
82.5°	387.1	367.8	316.5	315.0	355.9	380.8	404.9	254.8	231.1	218.8	87.3
85°	245.6	252.2	258.6	315.4	394.9	399.4	315.0	155.3	121.8	171.6	55.7
87.5°	72.8	118.5	143.8	244.1	355.9	357.0	237.0	50.9	45.7	53.5	32.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	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°	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: P227237

CATALOG NUMBER: IST-AF-450-LED-E1-SLL-8030

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
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: P227237

CATALOG NUMBER: IST-AF-450-LED-E1-SLL-8030

CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2	729.2
2.5°	748.9	747.4	737.0	719.6	721.1	712.9	702.5	685.8	682.4	673.1	671.7
5°	681.3	663.9	641.2	613.7	603.3	589.2	574.7	564.3	551.3	539.4	555.4
7.5°	591.0	565.4	539.0	510.1	493.3	470.3	458.0	434.3	416.8	413.5	399.7
10°	515.6	483.3	453.2	427.2	396.0	374.5	358.9	345.9	334.0	319.5	310.6
12.5°	465.5	429.1	397.1	364.8	349.9	332.1	322.5	310.2	293.1	280.8	269.0
15°	442.8	403.4	368.5	340.3	318.7	302.0	284.9	270.1	251.5	237.8	224.0
17.5°	439.8	388.6	344.4	312.8	289.4	271.2	248.5	228.8	206.2	190.9	179.4
20°	443.2	377.4	322.1	280.8	257.1	225.1	203.9	179.8	157.5	137.5	119.2
22.5°	456.6	371.5	300.2	254.8	219.6	183.1	160.5	129.6	110.7	91.4	84.3
25°	474.8	367.8	281.2	226.2	181.7	145.6	114.8	89.2	80.6	75.8	73.2
27.5°	494.1	361.1	260.0	199.9	151.2	107.4	85.8	75.0	71.7	69.1	67.2
30°	508.6	348.1	234.0	171.6	120.4	91.8	76.5	69.5	67.2	64.3	62.4
32.5°	514.9	328.0	210.6	144.9	101.4	78.8	66.9	62.8	60.6	58.0	56.8
35°	513.8	305.4	198.7	134.5	92.9	69.8	58.7	56.1	53.1	50.5	47.9
37.5°	514.9	284.6	189.5	131.9	89.2	63.2	53.5	51.6	49.4	46.8	44.6
40°	519.3	273.0	185.0	126.3	86.2	60.6	49.4	47.6	47.2	44.2	42.3
42.5°	521.2	274.2	182.8	118.5	78.8	59.8	49.4	45.3	45.3	43.1	40.9
45°	519.0	282.3	184.3	114.0	73.2	56.1	52.0	45.3	44.2	42.3	40.1
47.5°	525.7	288.3	184.3	113.3	69.5	52.4	49.4	49.8	45.0	42.7	39.4
50°	553.1	293.8	180.5	112.2	68.4	48.7	46.8	49.0	50.5	43.5	39.7
52.5°	601.8	300.9	176.5	110.3	66.9	45.7	43.5	46.1	51.6	45.7	39.7
55°	651.6	313.5	173.9	107.4	64.6	43.8	39.4	44.2	47.2	45.3	39.4
57.5°	704.7	327.3	171.3	100.3	59.4	42.0	37.9	38.6	42.3	43.8	38.3
59°	720.7	334.0	169.0	95.1	55.0	40.5	36.8	35.7	37.9	42.0	37.5
60°	732.2	334.3	166.4	90.6	52.4	39.7	36.0	34.5	35.3	43.1	37.9
62.5°	733.3	334.0	158.3	81.4	47.2	38.3	34.9	33.1	32.3	36.0	38.6
65°	687.3	318.4	143.4	76.5	47.6	36.8	33.1	31.6	30.1	30.8	33.4
67.5°	601.1	278.2	127.8	77.6	50.2	35.7	31.6	30.1	29.0	28.2	29.3
70°	454.7	231.1	123.3	80.2	52.4	34.9	29.3	27.9	27.1	26.7	26.7
72.5°	315.0	190.2	118.5	82.1	54.2	34.5	27.1	25.6	25.3	24.9	24.9
75°	202.8	138.2	98.1	69.8	49.4	31.6	24.5	23.0	22.7	22.3	22.7
77.5°	120.0	96.6	72.1	49.0	36.0	25.3	21.2	20.1	20.1	20.1	20.4
80°	66.5	57.2	47.9	31.6	25.6	18.9	17.5	16.3	16.3	16.7	17.5
82.5°	39.7	31.6	27.1	20.1	17.5	13.4	13.0	12.3	12.6	13.0	13.7
85°	26.0	20.1	16.3	13.4	11.9	8.5	7.4	7.8	8.2	8.9	9.3
87.5°	14.5	11.1	8.9	7.8	7.1	3.7	3.0	3.0	3.7	4.5	5.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	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: P227237
 CATALOG NUMBER: IST-AF-450-LED-E1-SLL-8030

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	
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	59°
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60°
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5°
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°
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°

'227237
 IST-AF-450-LED-E1-SLL-8030

REPORT NUMBER: P227237
 CATALOG NUMBER: IST-AF-450

TION (continued):

CANDELA DISTRIBUTION (con

165°	170°	175°	180°	185°	190°	195°	200°	205°	210°		215°	220°
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0°	729.2	729.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5°	631.9	631.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5°	518.6	515.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5°	402.0	414.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10°	289.8	298.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5°	201.7	206.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15°	138.9	147.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5°	108.1	109.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20°	89.2	89.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5°	79.1	80.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25°	66.5	68.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5°	58.7	60.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30°	53.9	54.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5°	49.0	49.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35°	45.0	45.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5°	42.0	42.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40°	39.4	39.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5°	35.7	36.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45°	32.3	32.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5°	30.1	30.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50°	28.6	29.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5°	27.9	28.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55°	27.5	28.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.5°	27.5	27.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59°	27.1	27.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60°	27.1	27.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5°	26.0	26.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°	25.3	26.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.5°	24.1	25.3
										70°	23.0	24.1
										72.5°	21.5	23.0
										75°	20.1	21.2
										77.5°	18.2	19.3
										80°	16.0	16.3
										82.5°	13.4	13.4
										85°	10.0	8.9
										87.5°	5.6	5.9
										90°	0.0	0.0
										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: P227237

CATALOG NUMBER: IST-AF-450-LED-E1-SLL-8030

SLL-8030

CANDELA DISTRIBUTION (continued):

230°	235°	240°	245°	250°	255°	260°	265°		270°	275°	280°	285°
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0°	729.2	729.2	729.2	729.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5°	626.3	640.1	641.9	643.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5°	514.9	528.6	520.8	524.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5°	375.9	367.0	378.5	385.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10°	274.5	284.9	289.4	297.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5°	227.7	234.4	242.6	255.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15°	184.6	189.5	199.9	212.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5°	134.5	141.5	148.2	158.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20°	90.3	93.2	101.4	106.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5°	72.4	73.6	75.0	79.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25°	65.0	65.8	66.9	68.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5°	59.1	59.4	60.6	61.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30°	53.9	53.5	53.9	55.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5°	48.3	48.3	49.0	49.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35°	41.6	41.2	42.0	43.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5°	38.3	38.6	39.4	40.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40°	36.4	36.8	37.5	38.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5°	34.5	35.3	36.0	37.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45°	33.4	34.2	35.3	36.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5°	33.1	33.8	34.9	36.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50°	32.3	33.4	34.5	36.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5°	32.3	33.1	34.2	36.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55°	31.2	32.3	33.4	35.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.5°	30.5	31.2	32.7	34.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59°	30.1	30.8	32.3	34.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60°	29.3	30.5	31.9	34.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5°	28.6	29.7	31.2	33.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°	27.5	29.0	30.5	31.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.5°	26.7	27.5	29.0	30.5
								70°	25.3	26.0	27.1	28.2
								72.5°	23.4	23.8	24.5	25.6
								75°	20.8	21.2	21.5	22.7
								77.5°	18.2	18.2	18.6	20.1
								80°	15.2	15.2	15.6	16.3
								82.5°	11.5	11.5	12.3	13.4
								85°	8.2	7.8	8.9	9.7
								87.5°	4.8	4.5	4.8	4.8
								90°	0.4	1.1	0.7	0.7
								92.5°	0.0	0.0	0.0	0.0
								95°	0.0	0.0	0.0	0.0
								97.5°	0.0	0.0	0.0	0.0
								100°	0.0	0.0	0.0	0.0
								102.5°	0.0	0.0	0.0	0.0
								105°	0.0	0.0	0.0	0.0
								107.5°	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

295°	300°	305°	310°	315°	320°		325°	330°	335°	340°	345°	350°
0.0	0.0	0.0	0.0	0.0	0.0	0°	729.2	729.2	729.2	729.2	729.2	729.2
0.0	0.0	0.0	0.0	0.0	0.0	2.5°	686.5	696.2	711.4	714.4	726.6	735.2
0.0	0.0	0.0	0.0	0.0	0.0	5°	581.8	604.8	613.0	628.9	656.8	670.9
0.0	0.0	0.0	0.0	0.0	0.0	7.5°	480.0	497.4	517.1	542.7	563.2	587.3
0.0	0.0	0.0	0.0	0.0	0.0	10°	394.9	419.8	445.4	466.2	494.8	523.8
0.0	0.0	0.0	0.0	0.0	0.0	12.5°	350.7	364.4	389.7	419.0	454.7	487.0
0.0	0.0	0.0	0.0	0.0	0.0	15°	327.7	344.0	371.1	402.3	440.2	480.3
0.0	0.0	0.0	0.0	0.0	0.0	17.5°	299.0	325.1	355.9	400.5	449.5	505.2
0.0	0.0	0.0	0.0	0.0	0.0	20°	270.8	302.4	342.9	401.6	469.6	542.0
0.0	0.0	0.0	0.0	0.0	0.0	22.5°	245.9	283.4	334.7	408.3	495.2	591.8
0.0	0.0	0.0	0.0	0.0	0.0	25°	216.6	266.7	328.4	422.0	534.6	658.7
0.0	0.0	0.0	0.0	0.0	0.0	27.5°	193.2	250.8	319.1	433.9	570.6	722.9
0.0	0.0	0.0	0.0	0.0	0.0	30°	167.2	232.2	306.1	438.0	614.4	775.7
0.0	0.0	0.0	0.0	0.0	0.0	32.5°	146.4	214.7	291.2	434.3	634.1	812.4
0.0	0.0	0.0	0.0	0.0	0.0	35°	136.3	202.1	278.6	421.3	650.5	852.2
0.0	0.0	0.0	0.0	0.0	0.0	37.5°	129.6	188.3	266.4	399.7	669.1	891.6
0.0	0.0	0.0	0.0	0.0	0.0	40°	121.1	177.6	256.3	384.1	683.5	924.3
0.0	0.0	0.0	0.0	0.0	0.0	42.5°	113.3	167.9	248.5	370.4	687.3	953.6
0.0	0.0	0.0	0.0	0.0	0.0	45°	106.6	162.0	242.6	371.1	689.9	994.5
0.0	0.0	0.0	0.0	0.0	0.0	47.5°	101.4	156.4	240.4	383.7	717.3	1051.3
0.0	0.0	0.0	0.0	0.0	0.0	50°	96.6	151.6	236.6	408.3	761.6	1128.2
0.0	0.0	0.0	0.0	0.0	0.0	52.5°	91.0	144.9	231.8	433.5	809.8	1231.1
0.0	0.0	0.0	0.0	0.0	0.0	55°	83.6	136.0	226.6	454.7	875.6	1356.3
0.0	0.0	0.0	0.0	0.0	0.0	57.5°	72.1	125.6	223.3	465.5	916.1	1428.4
0.0	0.0	0.0	0.0	0.0	0.0	59°	66.1	115.5	221.4	460.3	926.9	1440.6
0.0	0.0	0.0	0.0	0.0	0.0	60°	62.8	109.6	218.4	454.0	929.8	1432.8
0.0	0.0	0.0	0.0	0.0	0.0	62.5°	58.3	95.5	206.2	422.4	888.2	1338.5
0.0	0.0	0.0	0.0	0.0	0.0	65°	59.4	90.3	178.3	359.6	792.8	1154.2
0.0	0.0	0.0	0.0	0.0	0.0	67.5°	60.9	88.0	154.2	290.5	631.9	955.1
						70°	59.8	86.9	140.1	231.1	473.3	715.1
						72.5°	58.3	82.1	121.5	185.7	300.2	500.8
						75°	51.6	69.1	95.5	127.4	189.5	364.8
						77.5°	40.5	53.1	67.6	79.1	96.2	257.4
						80°	29.7	38.6	44.2	47.6	53.5	175.7
						82.5°	21.2	26.0	28.2	30.1	35.7	131.5
						85°	16.0	18.2	19.7	19.7	24.1	92.9
						87.5°	8.9	9.3	9.3	10.0	11.9	25.3
						90°	2.6	2.6	2.2	2.6	1.9	1.5
						92.5°	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
						97.5°	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
						102.5°	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
						107.5°	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P227237
 CATALOG NUMBER: IST-AF-450-LED-E1-SLL-8030

CANDELA DISTRIBUTION (continued):

355°	359°	360°		325°	330°	335°	340°	345°	350°	355°
729.2	729.2	729.2	110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
744.8	750.4	754.9	112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
692.5	706.2	708.8	115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
614.1	636.4	644.2	117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
556.5	580.6	588.8	120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
524.9	553.1	562.1	122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
525.7	559.5	572.5	125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
559.8	598.5	614.4	127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
618.5	674.6	686.5	130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
698.0	753.0	770.8	132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
772.7	845.5	859.3	135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
846.3	918.3	930.6	137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
903.1	978.5	988.9	140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
957.7	1042.8	1054.3	142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1018.6	1112.6	1126.0	145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1073.6	1181.3	1189.9	147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1134.5	1237.4	1239.7	150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1184.3	1279.0	1279.8	152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1232.6	1318.0	1318.4	155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1283.1	1360.8	1355.2	157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1363.0	1411.3	1416.9	160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1484.5	1527.6	1533.9	162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1625.6	1685.4	1676.9	165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1685.4	1753.8	1760.9	167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1675.4	1768.7	1780.5	170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1659.4	1764.2	1778.7	172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1568.8	1717.8	1740.4	175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1416.5	1621.6	1653.5	177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1220.7	1477.8	1503.4	180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
952.5	1201.0	1222.9								
633.0	824.7	862.6								
402.3	532.0	524.9								
296.8	345.9	346.2								
215.5	237.4	234.8								
166.8	144.9	144.5								
58.3	51.3	50.2								
25.3	21.2	21.5								
1.1	1.1	1.5								
0.0	0.0	0.0								
0.0	0.0	0.0								
0.0	0.0	0.0								
0.0	0.0	0.0								
0.0	0.0	0.0								
0.0	0.0	0.0								
0.0	0.0	0.0								
0.0	0.0	0.0								

