

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: P228347

Luminaire Tested: **ISS-AF-800-LED-E1-SL4-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228347
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29763)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISS-AF-800-LED-E1-SL4-7060
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV W/SPILL CONTROL
Light Source: (16) 5700K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4326 lumens
Efficiency: N/A
Efficacy: 99.4 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 - U0 - G2

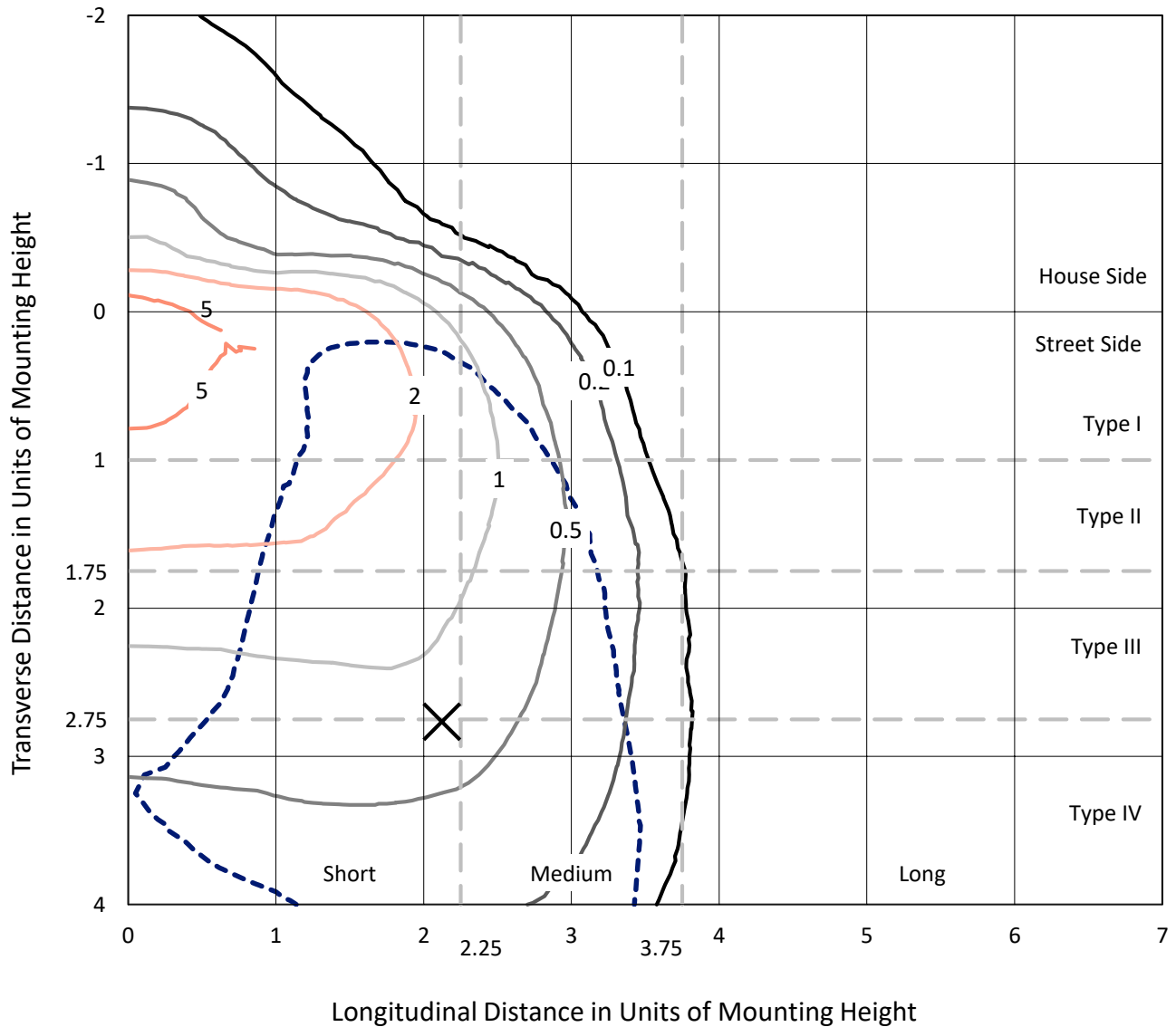
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P228347
 CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

Iso-Footcandle Lines of Horizontal Illumination

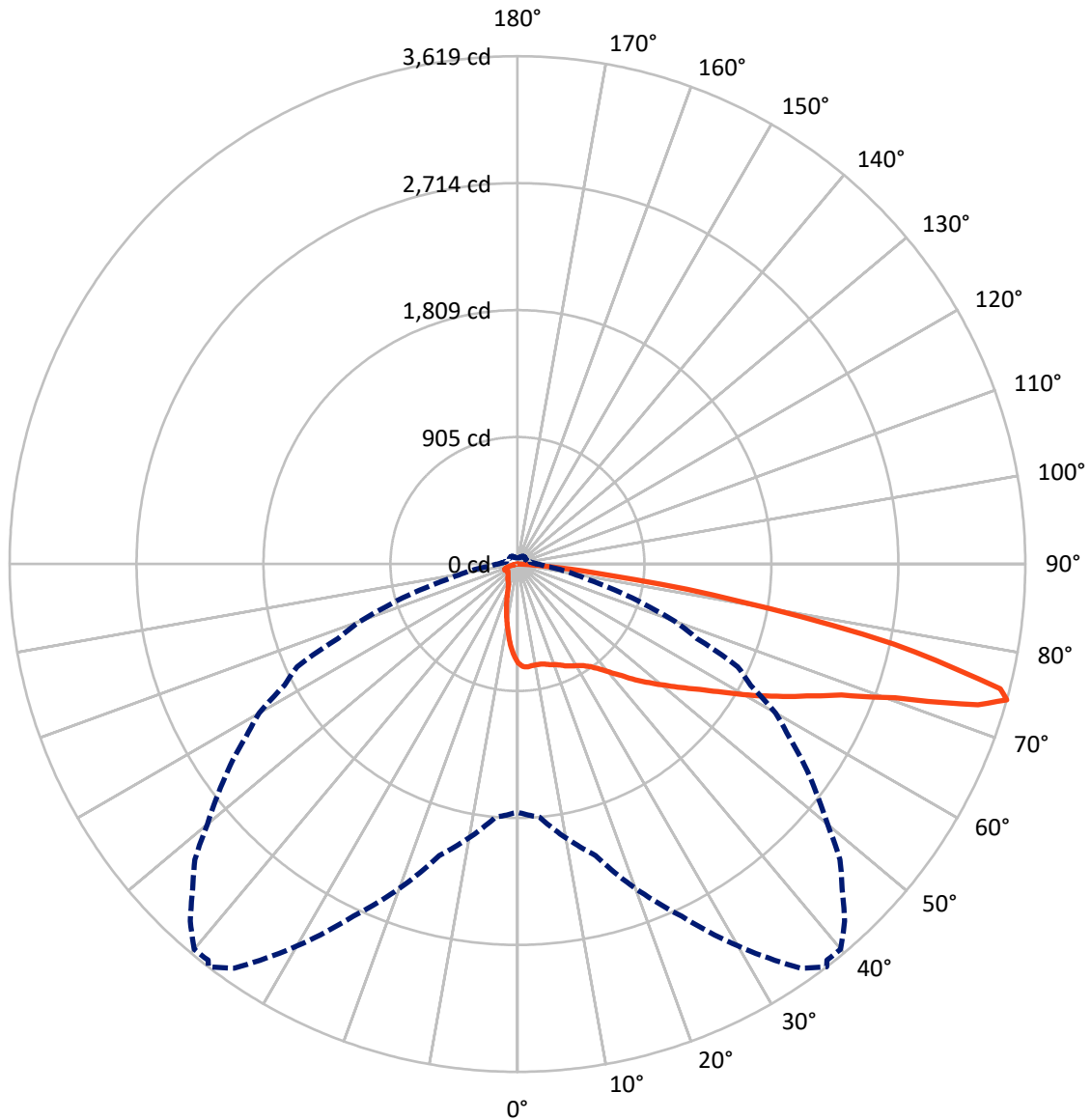
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P228347
CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

Luminous Intensity Polar Plot



— Vertical Plane Through 37.5-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

REPORT NUMBER: P228347

CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	512.9	0.0	512.9
	% Fixture	11.9	0.0	11.9
Street Side	Lumens	3813.0	0.0	3813.0
	% Fixture	88.1	0.0	88.1
Total	Lumens	4326.0	0.0	4326.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.5	1.4
10°-20°	156.6	3.6
20°-30°	242.6	5.6
30°-40°	359.9	8.3
40°-50°	553.6	12.8
50°-60°	818.3	18.9
60°-70°	1090.8	25.2
70°-80°	941.5	21.8
80°-90°	101.3	2.3
90°-100°	0.0	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°	4326.0	100.0
0°-180°	4326.0	100.0



REPORT NUMBER: P228347

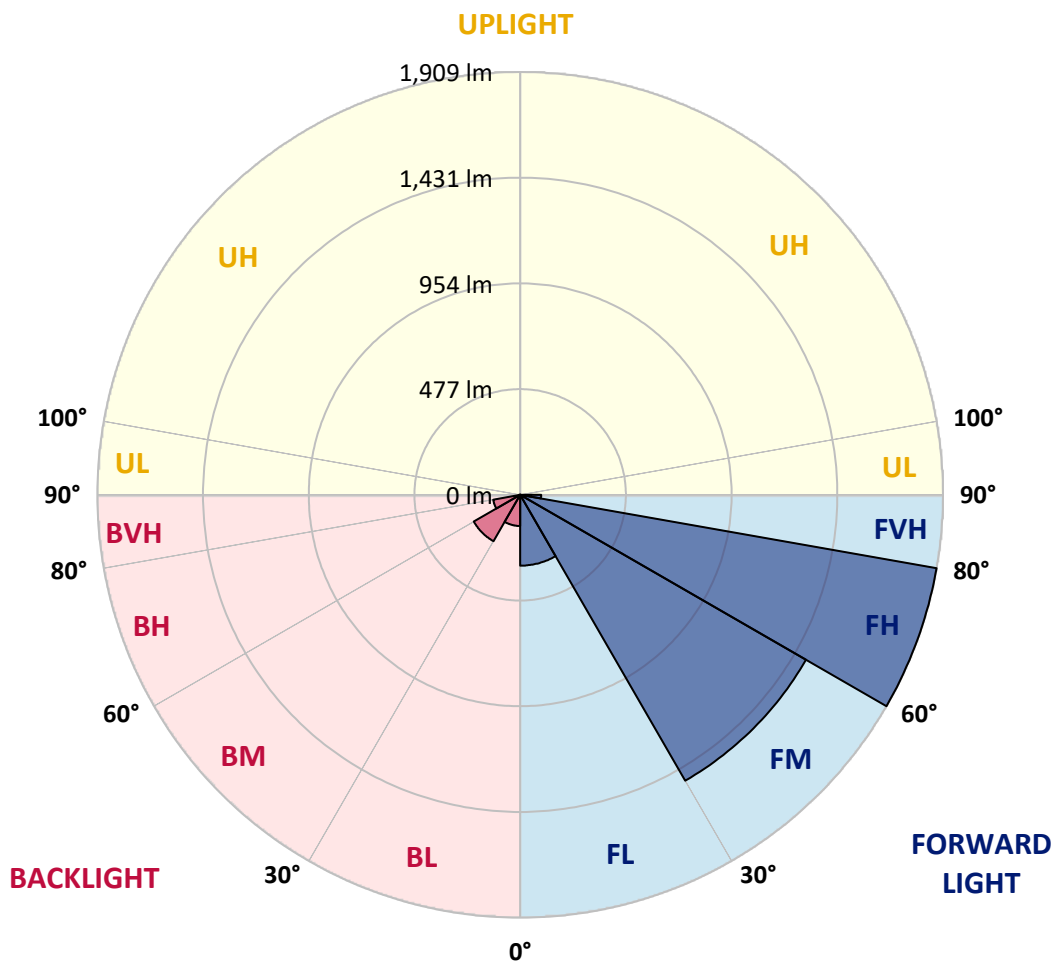
CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	319.8	7.4			
FM	(30°-60°)	1490.0	34.4			
FH	(60°-80°)	1908.6	44.1			G2/5000
FVH	(80°-90°)	94.6	2.2			G1/100
BL	(0°-30°)	140.8	3.3	B1/500		
BM	(30°-60°)	241.8	5.6	B1/1000		
BH	(60°-80°)	123.7	2.9	B1/500		G1/500
BVH	(80°-90°)	6.7	0.2			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





REPORT NUMBER: P228347
 CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	38°	40°	42.5°	45°	47.5°
0°	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9
2.5°	746.3	744.7	741.5	739.9	736.6	731.8	736.6	730.2	726.9	730.2	723.7
5°	759.2	757.6	754.4	747.9	744.7	736.6	741.5	733.4	731.8	735.0	726.9
7.5°	760.9	757.6	752.8	744.7	741.5	731.8	735.0	725.3	722.1	725.3	720.5
10°	756.0	754.4	749.6	736.6	733.4	730.2	728.6	722.1	720.5	718.9	717.2
12.5°	747.9	747.9	744.7	739.9	738.2	731.8	733.4	726.9	728.6	725.3	722.1
15°	744.7	743.1	746.3	749.6	749.6	739.9	746.3	741.5	738.2	739.9	735.0
17.5°	741.5	743.1	754.4	760.9	764.1	754.4	764.1	754.4	747.9	756.0	747.9
20°	739.9	744.7	764.1	778.6	780.2	764.1	780.2	764.1	764.1	773.8	759.2
22.5°	747.9	756.0	783.5	799.6	802.9	781.9	801.2	780.2	780.2	788.3	773.8
25°	773.8	781.9	812.6	830.3	827.1	804.5	822.2	801.2	799.6	809.3	789.9
27.5°	807.7	819.0	848.1	864.2	852.9	822.2	848.1	817.4	817.4	831.9	806.1
30°	856.2	864.2	890.1	891.7	877.2	840.0	869.1	835.2	830.3	856.2	823.9
32.5°	909.5	915.9	935.3	924.0	903.0	864.2	898.2	857.8	856.2	883.6	846.5
35°	966.0	972.5	978.9	959.6	940.2	898.2	935.3	894.9	893.3	924.0	888.5
37.5°	1024.2	1024.2	1024.2	1001.6	988.6	948.2	982.2	949.9	946.6	978.9	945.0
40°	1071.0	1074.2	1069.4	1048.4	1041.9	1012.9	1041.9	1012.9	1017.7	1046.8	1019.3
42.5°	1109.8	1113.0	1114.6	1096.9	1103.3	1087.2	1109.8	1088.8	1090.4	1122.7	1106.6
45°	1148.6	1146.9	1159.9	1155.0	1174.4	1176.0	1188.9	1180.9	1184.1	1208.3	1203.5
47.5°	1188.9	1180.9	1195.4	1216.4	1251.9	1263.3	1271.3	1274.6	1287.5	1298.8	1310.1
50°	1227.7	1219.6	1229.3	1276.2	1332.7	1356.9	1358.6	1374.7	1389.3	1405.4	1428.0
52.5°	1268.1	1261.6	1271.3	1337.6	1428.0	1461.9	1457.1	1484.6	1505.6	1523.3	1560.5
55°	1310.1	1303.6	1313.3	1411.9	1529.8	1576.6	1571.8	1610.6	1651.0	1657.4	1699.4
57.5°	1350.5	1342.4	1369.9	1499.1	1651.0	1722.0	1699.4	1759.2	1798.0	1794.7	1852.9
60°	1394.1	1387.6	1431.3	1605.7	1802.8	1894.9	1861.0	1940.1	1967.6	1956.3	2011.2
62.5°	1436.1	1434.5	1507.2	1730.1	1987.0	2075.8	2045.1	2114.6	2134.0	2119.4	2146.9
65°	1474.9	1484.6	1589.6	1854.5	2164.7	2266.4	2224.4	2293.9	2316.5	2305.2	2352.0
67.5°	1539.5	1550.8	1691.3	2012.8	2384.3	2489.3	2453.8	2526.5	2560.4	2557.2	2608.9
70°	1634.8	1655.8	1841.6	2237.3	2718.7	2852.8	2833.4	2922.3	3004.7	2998.2	3049.9
72.5°	1801.2	1835.1	2088.7	2586.3	3268.0	3431.1	3408.5	3458.6	3444.1	3326.1	3230.8
74°	1768.9	1810.9	2150.1	2768.8	3515.1	3618.5	3581.4	3583.0	3450.5	3271.2	3117.7
75°	1651.0	1694.6	2061.3	2746.2	3497.4	3553.9	3500.6	3434.4	3274.4	3091.9	2902.9
77.5°	1132.4	1188.9	1515.3	2218.0	2815.7	2738.1	2725.2	2599.2	2387.6	2182.4	1940.1
80°	579.9	620.3	783.5	1159.9	1670.3	1592.8	1618.6	1516.9	1340.8	1192.2	945.0
82.5°	138.9	148.6	231.0	449.1	723.7	662.3	672.0	594.5	492.7	402.2	311.8
85°	72.7	82.4	113.1	124.4	190.6	197.1	192.2	185.8	151.8	127.6	111.5
87.5°	0.0	0.0	0.0	3.2	1.6	0.0	1.6	0.0	0.0	1.6	3.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P228347

CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

CANDELA DISTRIBUTION (continued):

	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9
2.5°	728.6	725.3	728.6	718.9	723.7	715.6	718.9	710.8	714.0	707.6	709.2
5°	731.8	723.7	728.6	720.5	722.1	715.6	714.0	710.8	709.2	704.3	701.1
7.5°	723.7	717.2	715.6	712.4	707.6	709.2	702.7	701.1	696.2	696.2	686.5
10°	715.6	717.2	707.6	710.8	702.7	704.3	693.0	696.2	688.2	694.6	680.1
12.5°	722.1	723.7	715.6	720.5	705.9	709.2	699.5	704.3	693.0	701.1	683.3
15°	736.6	735.0	731.8	731.8	717.2	723.7	712.4	715.6	704.3	714.0	694.6
17.5°	749.6	747.9	743.1	741.5	731.8	733.4	722.1	728.6	715.6	723.7	704.3
20°	764.1	756.0	754.4	752.8	741.5	741.5	733.4	736.6	723.7	733.4	710.8
22.5°	775.4	768.9	767.3	760.9	752.8	756.0	744.7	746.3	733.4	743.1	723.7
25°	793.2	785.1	785.1	775.4	770.6	768.9	762.5	767.3	754.4	760.9	743.1
27.5°	817.4	799.6	806.1	796.4	793.2	791.6	788.3	791.6	781.9	786.7	768.9
30°	840.0	817.4	827.1	814.2	820.6	814.2	819.0	814.2	814.2	814.2	806.1
32.5°	870.7	843.2	862.6	843.2	856.2	846.5	862.6	852.9	859.4	857.8	854.6
35°	914.3	882.0	909.5	883.6	906.2	893.3	915.9	911.1	924.0	917.6	924.0
37.5°	972.5	938.6	970.9	946.6	974.1	954.7	987.0	983.8	1011.2	1001.6	1011.2
40°	1045.2	1020.9	1045.2	1027.4	1056.5	1048.4	1082.3	1083.9	1114.6	1109.8	1121.1
42.5°	1125.9	1108.2	1132.4	1122.7	1151.8	1158.2	1197.0	1206.7	1235.8	1243.9	1245.5
45°	1213.2	1209.9	1229.3	1239.0	1268.1	1287.5	1321.4	1345.6	1377.9	1395.7	1392.5
47.5°	1314.9	1327.9	1340.8	1365.0	1390.9	1431.3	1465.2	1495.9	1533.0	1544.3	1549.2
50°	1429.6	1452.3	1463.6	1497.5	1523.3	1573.4	1620.3	1659.0	1699.4	1694.6	1697.8
52.5°	1550.8	1579.9	1596.0	1636.4	1670.3	1728.5	1768.9	1806.0	1856.1	1843.2	1838.3
55°	1684.9	1728.5	1741.4	1786.6	1815.7	1875.5	1911.0	1975.6	1996.6	1983.7	1956.3
57.5°	1827.0	1878.7	1893.3	1954.6	1969.2	2033.8	2064.5	2108.1	2125.9	2104.9	2069.3
60°	1988.6	2035.4	2046.7	2101.7	2121.0	2180.8	2203.4	2242.2	2255.1	2203.4	2153.3
62.5°	2150.1	2198.6	2205.0	2253.5	2272.9	2324.6	2350.4	2373.0	2366.6	2290.7	2227.7
65°	2334.3	2381.1	2397.3	2445.7	2457.0	2495.8	2516.8	2491.0	2476.4	2361.7	2290.7
67.5°	2626.7	2676.7	2683.2	2694.5	2692.9	2673.5	2663.8	2575.0	2510.3	2298.7	2197.0
70°	3011.1	2974.0	2901.3	2817.3	2755.9	2646.0	2581.4	2398.9	2263.2	2025.7	1854.5
72.5°	3080.6	2959.4	2780.1	2636.4	2487.7	2314.9	2176.0	1899.7	1709.1	1460.3	1279.4
74°	2883.5	2686.4	2497.4	2295.5	2124.3	1872.3	1731.7	1382.8	1193.8	941.8	722.1
75°	2646.0	2415.0	2201.8	1945.0	1785.0	1482.9	1350.5	974.1	785.1	558.9	376.4
77.5°	1688.1	1411.9	1208.3	911.1	786.7	542.8	397.4	247.2	182.5	159.9	138.9
80°	757.6	539.5	428.1	295.6	247.2	189.0	159.9	129.2	117.9	103.4	98.5
82.5°	242.3	193.8	184.2	164.8	164.8	132.5	113.1	88.8	80.8	69.5	63.0
85°	105.0	98.5	101.8	93.7	95.3	72.7	58.2	43.6	43.6	30.7	27.5
87.5°	3.2	0.0	1.6	0.0	3.2	0.0	1.6	0.0	1.6	0.0	1.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P228347

CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

CANDELA DISTRIBUTION (continued):

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9
2.5°	702.7	705.9	704.3	697.9	696.2	691.4	680.1	681.7	675.2	680.1	672.0
5°	696.2	694.6	688.2	680.1	672.0	662.3	654.2	651.0	644.5	641.3	636.5
7.5°	686.5	680.1	668.8	655.9	644.5	631.6	625.2	613.9	610.6	599.3	597.7
10°	683.3	672.0	659.1	642.9	623.5	604.2	602.5	583.2	581.5	563.8	558.9
12.5°	689.8	675.2	659.1	639.7	617.1	589.6	589.6	560.5	558.9	534.7	526.6
15°	702.7	684.9	663.9	641.3	612.2	578.3	576.7	542.8	539.5	510.5	500.8
17.5°	714.0	689.8	670.4	639.7	605.8	567.0	558.9	525.0	518.5	484.6	471.7
20°	722.1	694.6	672.0	636.5	594.5	549.2	537.9	502.4	487.9	453.9	436.2
22.5°	731.8	705.9	675.2	634.9	588.0	534.7	510.5	478.2	457.2	421.6	397.4
25°	746.3	723.7	686.5	639.7	583.2	520.2	487.9	453.9	424.9	389.3	353.8
27.5°	768.9	746.3	702.7	646.2	581.5	505.6	470.1	428.1	392.5	353.8	313.4
30°	801.2	777.0	730.2	663.9	583.2	494.3	450.7	405.5	363.5	318.2	276.2
32.5°	843.2	823.9	765.7	683.3	589.6	484.6	432.9	381.2	329.5	285.9	248.8
35°	901.4	888.5	815.8	720.5	605.8	479.8	415.2	358.6	300.5	256.9	216.5
37.5°	987.0	969.2	888.5	773.8	631.6	476.5	402.2	331.2	276.2	229.4	195.5
40°	1095.2	1071.0	974.1	838.4	672.0	478.2	390.9	310.2	255.2	205.2	177.7
42.5°	1224.5	1188.9	1079.1	917.6	712.4	481.4	384.5	290.8	239.1	185.8	164.8
45°	1369.9	1329.5	1203.5	1016.1	770.6	489.5	379.6	274.6	224.5	171.2	156.7
47.5°	1512.0	1471.6	1331.1	1114.6	830.3	504.0	382.9	264.9	214.8	163.2	147.0
50°	1651.0	1608.9	1444.2	1203.5	882.0	523.4	395.8	266.5	213.2	159.9	142.2
52.5°	1773.7	1722.0	1541.1	1272.9	919.2	536.3	407.1	271.4	214.8	158.3	140.5
55°	1896.5	1830.3	1618.6	1327.9	941.8	537.9	407.1	273.0	216.5	158.3	138.9
57.5°	1988.6	1912.6	1678.4	1360.2	949.9	529.9	397.4	264.9	206.8	156.7	135.7
60°	2046.7	1966.0	1720.4	1381.2	938.6	495.9	345.7	234.2	182.5	145.4	126.0
62.5°	2095.2	2012.8	1733.3	1345.6	843.2	394.2	269.8	190.6	151.8	129.2	116.3
65°	2106.5	2008.0	1642.9	1188.9	659.1	273.0	195.5	150.2	124.4	114.7	105.0
67.5°	1935.3	1817.3	1381.2	930.5	449.1	187.4	145.4	122.8	106.6	101.8	98.5
70°	1573.4	1444.2	1011.2	609.0	250.4	130.8	111.5	101.8	92.1	92.1	87.2
72.5°	1014.5	880.4	518.5	260.1	127.6	100.2	90.5	87.2	79.2	80.8	75.9
74°	518.5	403.9	211.6	137.3	105.0	88.8	80.8	79.2	71.1	72.7	67.8
75°	263.3	208.4	148.6	114.7	96.9	84.0	74.3	74.3	64.6	66.2	61.4
77.5°	122.8	117.9	101.8	90.5	82.4	71.1	61.4	59.8	50.1	53.3	46.8
80°	85.6	85.6	79.2	75.9	67.8	58.2	46.8	46.8	37.2	38.8	33.9
82.5°	48.5	45.2	45.2	51.7	53.3	43.6	33.9	32.3	27.5	27.5	22.6
85°	21.0	24.2	29.1	35.5	38.8	33.9	24.2	22.6	14.5	14.5	8.1
87.5°	0.0	1.6	1.6	3.2	6.5	6.5	0.0	3.2	0.0	1.6	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P228347

CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

CANDELA DISTRIBUTION (continued):

	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°
0°	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9	705.9
2.5°	675.2	667.2	672.0	663.9	667.2	659.1	662.3	657.5	652.6	646.2	644.5
5°	631.6	625.2	623.5	615.5	617.1	610.6	604.2	596.1	586.4	573.5	568.6
7.5°	583.2	581.5	570.2	565.4	558.9	552.5	541.2	528.2	508.9	491.1	479.8
10°	541.2	536.3	520.2	512.1	502.4	494.3	478.2	460.4	432.9	405.5	390.9
12.5°	505.6	499.2	478.2	468.5	453.9	444.2	424.9	402.2	363.5	324.7	306.9
15°	476.5	466.9	442.6	428.1	408.7	399.0	378.0	345.7	298.9	258.5	234.2
17.5°	442.6	429.7	403.9	386.1	366.7	348.9	327.9	294.0	240.7	203.5	179.3
20°	405.5	389.3	361.9	337.6	316.6	300.5	279.5	245.5	192.2	163.2	150.2
22.5°	366.7	340.9	316.6	295.6	271.4	255.2	234.2	203.5	163.2	147.0	142.2
25°	326.3	297.2	273.0	252.0	229.4	214.8	197.1	172.8	148.6	143.8	143.8
27.5°	285.9	256.9	234.2	213.2	193.8	184.2	168.0	151.8	140.5	142.2	143.8
30°	248.8	219.7	198.7	182.5	164.8	158.3	145.4	135.7	134.1	138.9	140.5
32.5°	216.5	190.6	171.2	158.3	143.8	140.5	129.2	124.4	129.2	135.7	134.1
35°	189.0	168.0	148.6	140.5	127.6	126.0	117.9	114.7	121.2	129.2	129.2
37.5°	168.0	148.6	134.1	127.6	117.9	116.3	109.8	106.6	111.5	122.8	126.0
40°	150.2	138.9	124.4	117.9	111.5	108.2	105.0	101.8	103.4	117.9	119.5
42.5°	138.9	130.8	117.9	114.7	106.6	105.0	100.2	96.9	98.5	109.8	114.7
45°	130.8	124.4	113.1	111.5	103.4	101.8	96.9	93.7	95.3	105.0	109.8
47.5°	124.4	117.9	108.2	105.0	100.2	98.5	95.3	92.1	92.1	101.8	106.6
50°	121.2	114.7	105.0	101.8	96.9	95.3	92.1	88.8	90.5	98.5	101.8
52.5°	119.5	111.5	103.4	98.5	95.3	92.1	88.8	85.6	87.2	95.3	98.5
55°	119.5	109.8	103.4	98.5	93.7	88.8	87.2	82.4	85.6	92.1	96.9
57.5°	119.5	109.8	103.4	98.5	95.3	90.5	87.2	84.0	85.6	92.1	96.9
60°	116.3	108.2	105.0	100.2	98.5	93.7	92.1	88.8	88.8	96.9	105.0
62.5°	111.5	106.6	105.0	101.8	101.8	98.5	98.5	95.3	95.3	105.0	113.1
65°	105.0	101.8	103.4	101.8	101.8	101.8	100.2	100.2	100.2	108.2	117.9
67.5°	98.5	96.9	98.5	98.5	100.2	98.5	100.2	98.5	98.5	106.6	116.3
70°	88.8	88.8	90.5	88.8	90.5	90.5	92.1	92.1	92.1	96.9	106.6
72.5°	77.5	75.9	77.5	75.9	79.2	75.9	79.2	80.8	79.2	80.8	85.6
74°	69.5	67.8	69.5	67.8	71.1	67.8	69.5	69.5	67.8	54.9	46.8
75°	63.0	61.4	63.0	61.4	64.6	61.4	64.6	63.0	59.8	40.4	38.8
77.5°	50.1	45.2	50.1	45.2	48.5	43.6	46.8	40.4	30.7	29.1	29.1
80°	37.2	32.3	35.5	30.7	29.1	22.6	24.2	22.6	21.0	22.6	22.6
82.5°	22.6	16.2	19.4	14.5	17.8	12.9	16.2	14.5	12.9	12.9	12.9
85°	11.3	8.1	11.3	6.5	9.7	6.5	8.1	8.1	4.8	4.8	4.8
87.5°	1.6	0.0	3.2	0.0	3.2	0.0	1.6	1.6	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P228347

CATALOG NUMBER: ISS-AF-800-LED-E1-SL4-7060

CANDELA DISTRIBUTION (continued):

	175°	180°
0°	705.9	705.9
2.5°	639.7	641.3
5°	560.5	565.4
7.5°	473.3	476.5
10°	381.2	384.5
12.5°	294.0	297.2
15°	221.3	218.1
17.5°	169.6	166.4
20°	143.8	143.8
22.5°	140.5	138.9
25°	142.2	140.5
27.5°	142.2	140.5
30°	138.9	137.3
32.5°	134.1	132.5
35°	129.2	129.2
37.5°	126.0	127.6
40°	121.2	122.8
42.5°	116.3	117.9
45°	111.5	113.1
47.5°	106.6	106.6
50°	100.2	100.2
52.5°	98.5	98.5
55°	98.5	98.5
57.5°	101.8	101.8
60°	111.5	113.1
62.5°	130.8	132.5
65°	150.2	153.5
67.5°	151.8	156.7
70°	147.0	151.8
72.5°	101.8	101.8
74°	45.2	43.6
75°	38.8	37.2
77.5°	29.1	29.1
80°	21.0	19.4
82.5°	11.3	11.3
85°	3.2	3.2
87.5°	0.0	0.0
90°	0.0	0.0

(END OF REPORT)