

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: INVUE

Report Number: P141725

Luminaire Tested: **ECM-F03-LED-E1-T2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141725
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33682)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F03-LED-E1-T2
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7301.1 lumens
Efficiency: N/A
Efficacy: 93.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

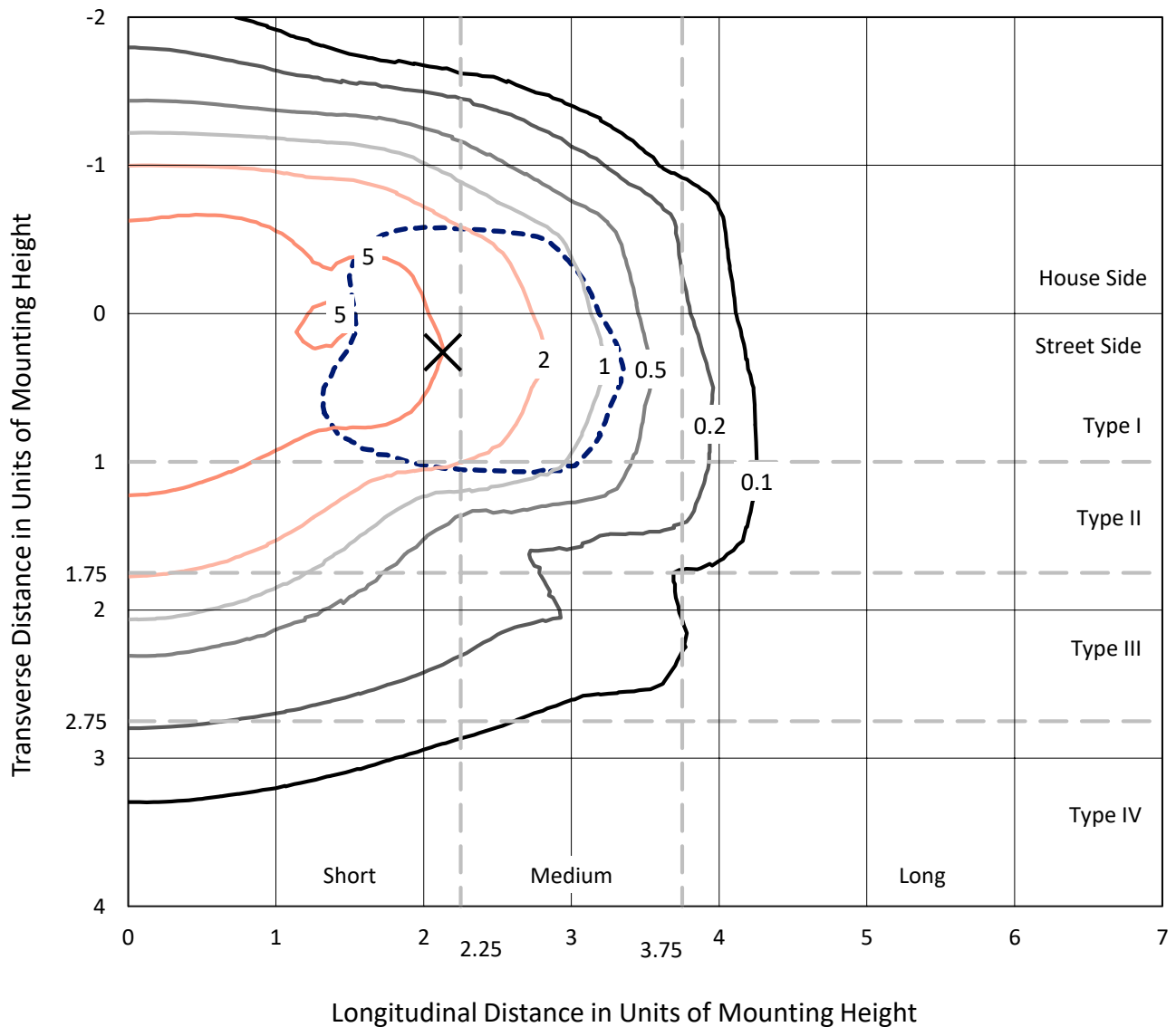
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

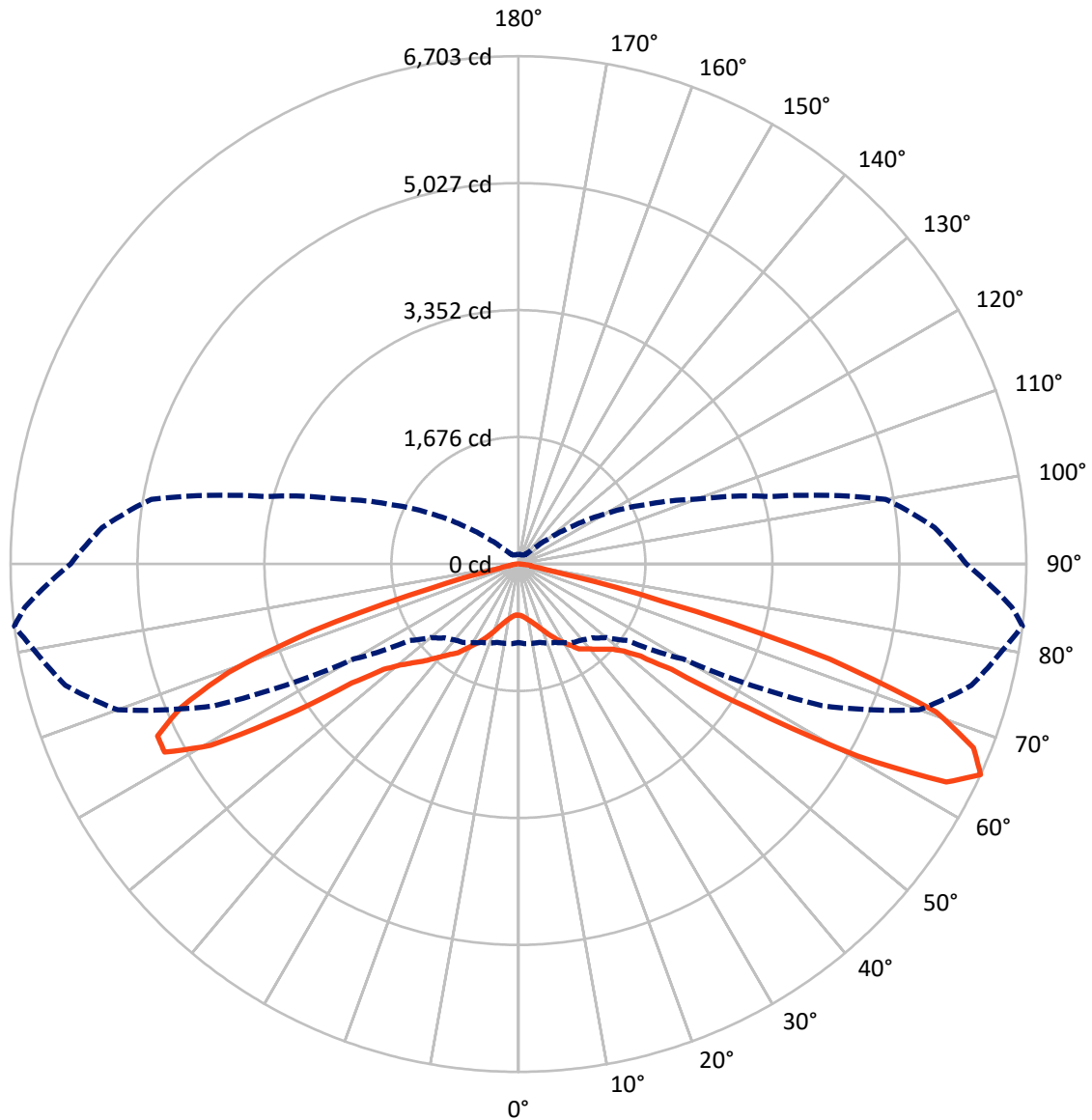
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 83-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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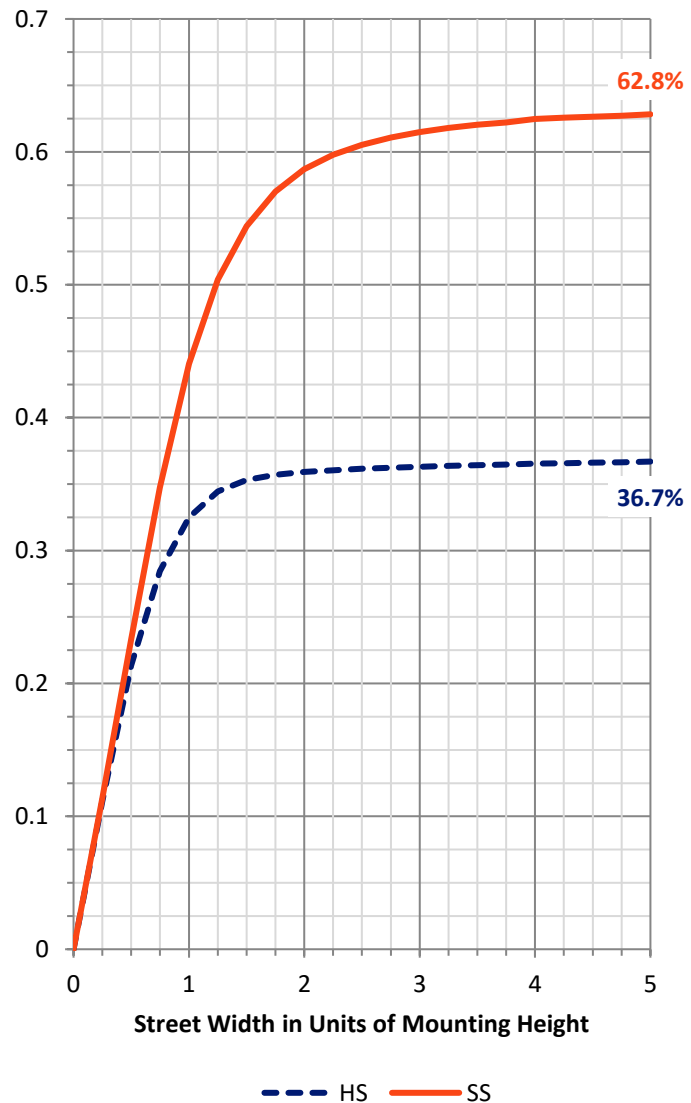
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2708.2	0.0	2708.2
	% Fixture	37.1	0.0	37.1
Street Side	Lumens	4592.9	0.0	4592.9
	% Fixture	62.9	0.0	62.9
Total	Lumens	7301.1	0.0	7301.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	0.9
10°-20°	238.3	3.3
20°-30°	470.8	6.4
30°-40°	810.3	11.1
40°-50°	1222.4	16.7
50°-60°	1701.1	23.3
60°-70°	1963.4	26.9
70°-80°	713.6	9.8
80°-90°	113.3	1.6
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°	7301.1	100.0
0°-180°	7301.1	100.0



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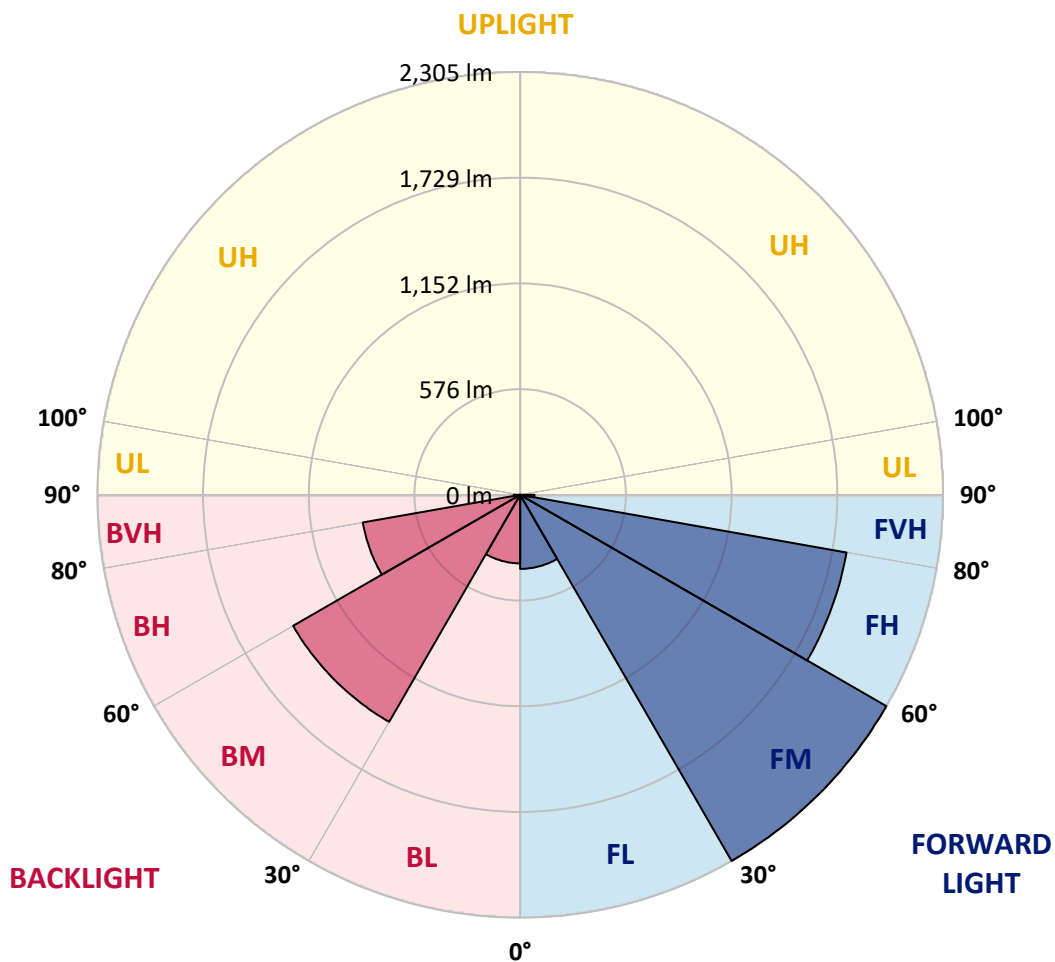
CATALOG NUMBER: ECM-F03-LED-E1-T2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	403.6	5.5			
FM	(30°-60°)	2304.8	31.6			
FH	(60°-80°)	1806.3	24.7			G2/5000
FVH	(80°-90°)	78.3	1.1			G1/100
BL	(0°-30°)	373.5	5.1	B1/500		
BM	(30°-60°)	1428.9	19.6	B2/2500		
BH	(60°-80°)	870.7	11.9	B2/1000		G2/1000
BVH	(80°-90°)	35.0	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1
2.5°	709.1	710.8	709.1	709.1	708.3	707.5	707.5	706.6	705.0	703.3	702.5
5°	747.9	748.8	746.3	746.3	747.1	746.3	743.8	744.6	738.0	735.5	733.9
7.5°	790.9	793.3	790.0	788.4	787.6	785.9	783.4	779.3	774.3	770.2	767.7
10°	839.6	842.0	840.4	837.1	832.1	829.7	827.2	820.6	814.8	808.2	803.2
12.5°	897.3	898.2	896.5	889.9	886.6	879.2	870.9	863.5	855.2	845.3	837.1
15°	954.3	955.1	952.7	946.1	941.9	932.8	921.3	911.4	897.3	885.8	875.1
17.5°	998.1	999.7	994.8	989.8	984.0	972.5	961.7	950.2	935.3	922.9	912.2
20°	1012.9	1015.4	1012.1	1009.6	1006.3	1000.5	989.8	979.9	966.7	957.6	949.4
22.5°	1006.3	1008.8	1007.1	1007.1	1007.1	1006.3	1001.4	998.9	990.6	986.5	984.9
25°	996.4	998.9	997.2	998.9	1002.2	1006.3	1006.3	1011.3	1010.4	1017.0	1021.2
27.5°	1022.0	1023.7	1019.5	1019.5	1022.8	1029.4	1027.8	1037.7	1039.3	1052.5	1064.9
30°	1111.2	1111.2	1104.6	1097.9	1100.4	1098.8	1097.1	1103.7	1103.7	1116.1	1121.9
32.5°	1244.1	1235.0	1234.2	1233.3	1227.6	1231.7	1218.5	1219.3	1213.5	1215.2	1212.7
35°	1390.2	1389.4	1386.1	1384.4	1381.9	1394.3	1384.4	1392.7	1372.0	1364.6	1350.6
37.5°	1518.1	1521.4	1523.9	1536.3	1542.1	1566.8	1572.6	1576.8	1555.3	1556.1	1524.7
40°	1646.9	1651.0	1660.1	1682.4	1698.9	1722.0	1732.8	1750.1	1751.8	1755.1	1732.0
42.5°	1787.3	1780.7	1793.0	1821.1	1841.7	1864.9	1878.9	1911.1	1929.3	1938.3	1941.6
45°	1900.4	1892.9	1898.7	1915.2	1934.2	1963.9	1994.5	2042.3	2081.1	2123.3	2146.4
47.5°	1959.0	1960.6	1964.7	1974.7	1987.9	2016.8	2059.7	2120.8	2183.5	2251.2	2311.5
50°	1978.0	1978.8	1984.6	1994.5	2006.9	2037.4	2082.0	2151.3	2227.3	2322.2	2414.7
52.5°	1983.7	1980.4	1986.2	1991.2	1999.4	2025.0	2067.1	2139.8	2225.6	2340.4	2477.4
55°	1962.3	1958.1	1968.1	1974.7	1981.3	2001.9	2034.1	2101.0	2190.1	2320.6	2499.7
57.5°	1879.7	1880.5	1894.6	1911.9	1929.3	1957.3	1999.4	2063.0	2151.3	2280.1	2480.7
60°	1740.2	1737.7	1755.1	1776.5	1806.2	1850.8	1902.8	1967.2	2040.7	2148.0	2345.3
62.5°	1486.8	1496.7	1502.5	1534.7	1536.3	1599.9	1633.7	1698.1	1760.8	1843.4	2020.9
65°	1035.2	1056.7	1062.5	1070.7	1109.5	1142.5	1197.0	1264.7	1306.0	1378.6	1510.7
67.5°	644.7	660.4	661.2	682.7	716.6	754.5	796.6	865.2	927.9	939.4	1005.5
70°	534.9	535.8	547.3	563.0	589.4	628.2	669.5	717.4	774.3	810.7	804.1
72.5°	443.3	448.3	456.5	472.2	501.1	535.8	588.6	649.7	720.7	793.3	857.7
75°	297.2	305.4	307.9	315.4	329.4	360.8	400.4	458.2	549.8	657.9	795.0
77.5°	157.7	159.3	165.1	170.9	178.3	197.3	222.9	252.6	312.9	406.2	567.1
80°	80.1	83.4	87.5	91.6	90.8	95.8	103.2	116.4	137.0	178.3	256.7
82.5°	28.9	37.1	48.7	54.5	54.5	56.1	58.6	61.1	59.4	66.0	82.6
85°	13.2	14.9	19.0	29.7	30.5	30.5	30.5	32.2	30.5	27.2	32.2
87.5°	0.0	2.5	2.5	7.4	8.3	7.4	8.3	10.7	8.3	6.6	5.8
90°	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):

	55°	60°	65°	70°	75°	80°	83°	85°	90°	95°	100°
0°	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1
2.5°	698.4	696.7	692.6	691.0	686.0	682.7	681.1	679.4	676.9	673.6	671.2
5°	728.9	724.0	718.2	714.9	708.3	701.7	699.2	695.9	690.1	685.2	679.4
7.5°	761.1	755.4	748.8	741.3	734.7	727.3	724.0	720.7	712.4	705.8	697.6
10°	795.8	787.6	780.1	773.5	767.7	759.5	753.7	751.2	743.8	733.9	725.6
12.5°	828.8	819.7	812.3	804.1	798.3	791.7	785.9	783.4	777.6	768.6	762.0
15°	863.5	854.4	846.2	840.4	833.8	829.7	826.4	822.2	819.7	812.3	809.0
17.5°	900.6	892.4	885.0	880.0	877.5	876.7	875.9	874.2	871.8	866.8	864.3
20°	942.7	935.3	932.8	932.0	932.8	933.7	935.3	935.3	936.1	932.8	932.0
22.5°	983.2	983.2	987.3	992.3	997.2	1000.5	1003.0	999.7	1000.5	1005.5	1009.6
25°	1027.8	1035.2	1045.9	1054.2	1061.6	1067.4	1070.7	1072.4	1074.0	1081.4	1088.9
27.5°	1075.7	1087.2	1102.9	1113.6	1127.7	1136.7	1143.4	1142.5	1145.0	1154.9	1168.1
30°	1135.1	1146.7	1163.2	1178.0	1197.0	1210.2	1212.7	1211.0	1214.3	1223.4	1249.8
32.5°	1218.5	1221.0	1231.7	1246.5	1267.2	1280.4	1282.9	1287.0	1294.4	1310.9	1343.1
35°	1335.7	1325.0	1324.1	1330.7	1350.6	1376.2	1378.6	1381.1	1384.4	1405.9	1448.8
37.5°	1494.2	1450.4	1424.0	1403.4	1405.9	1414.9	1419.9	1421.6	1429.8	1462.8	1535.5
40°	1693.2	1611.4	1552.8	1494.2	1472.7	1474.4	1476.0	1474.4	1490.9	1542.1	1637.0
42.5°	1911.1	1839.3	1736.9	1615.6	1554.5	1534.7	1537.1	1538.8	1564.4	1638.7	1744.3
45°	2142.2	2096.0	1977.1	1787.3	1656.0	1605.6	1604.0	1607.3	1649.4	1754.2	1865.7
47.5°	2345.3	2356.9	2269.4	2046.5	1821.1	1693.2	1682.4	1688.2	1756.7	1869.0	1982.1
50°	2506.3	2582.2	2575.6	2399.0	2088.6	1844.2	1806.2	1814.5	1895.4	2011.8	2113.3
52.5°	2627.6	2782.0	2881.1	2810.9	2541.0	2118.3	2020.1	2006.0	2107.6	2230.6	2293.3
55°	2708.5	2958.7	3218.7	3340.1	3230.3	2710.2	2453.5	2422.9	2532.7	2689.6	2716.8
57.5°	2762.2	3173.3	3733.0	4201.9	4351.3	3905.6	3583.6	3455.6	3535.7	3701.7	3666.2
60°	2673.0	3258.3	4353.8	5194.2	5619.3	5508.7	5150.5	4957.3	4807.9	4795.5	4598.2
62.5°	2331.3	3056.1	4605.6	5666.4	6264.1	6401.9	6338.4	6109.7	5696.1	5466.6	5020.8
65°	1758.4	2503.8	4426.5	5630.1	6190.6	6496.1	6703.3	6539.0	5911.6	5514.5	4921.8
67.5°	1123.5	1616.4	3681.8	5193.4	5720.1	6063.5	6477.9	6402.8	5601.2	5094.3	4449.6
70°	820.6	895.7	2498.0	4395.9	4975.4	5277.6	5847.2	5814.2	4911.9	4342.3	3703.3
72.5°	945.2	667.8	1369.5	3283.9	3732.2	3969.9	4296.0	4216.0	3431.7	3036.3	2583.9
75°	1065.8	747.1	771.9	1948.2	2085.3	1918.5	1963.1	1704.7	1329.9	1178.8	1161.5
77.5°	897.3	937.0	700.0	837.1	771.0	555.6	416.1	326.1	255.1	274.1	304.6
80°	521.7	1053.4	926.2	435.9	488.7	388.8	173.4	143.6	118.9	120.5	122.2
82.5°	161.0	657.9	1303.5	532.5	483.8	548.1	159.3	97.4	78.4	88.3	99.9
85°	53.7	275.7	1045.1	558.9	312.9	292.2	70.2	47.9	39.6	55.3	78.4
87.5°	13.2	66.9	194.0	73.5	46.2	28.1	23.9	17.3	19.0	34.7	48.7
90°	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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1	676.1
2.5°	669.5	667.0	664.5	662.9	660.4	660.4	657.9	657.9	654.6	653.0	653.0
5°	674.5	669.5	665.4	661.2	657.1	655.5	652.2	650.5	647.2	644.7	643.1
7.5°	691.0	684.4	679.4	674.5	669.5	667.0	663.7	660.4	659.6	657.9	656.3
10°	719.0	710.0	705.8	702.5	695.9	694.3	691.0	688.5	686.0	683.5	684.4
12.5°	755.4	748.8	747.1	740.5	738.8	736.4	731.4	729.8	723.2	718.2	715.7
15°	801.6	799.1	799.1	795.8	790.9	786.7	779.3	775.2	763.6	756.2	747.9
17.5°	862.7	860.2	861.0	857.7	851.9	844.5	836.3	823.9	806.5	793.3	776.8
20°	933.7	932.8	934.5	932.0	924.6	914.7	894.9	876.7	852.8	828.8	810.7
22.5°	1012.9	1017.0	1018.7	1012.1	1003.8	983.2	961.7	935.3	903.1	871.8	846.2
25°	1097.1	1107.0	1112.8	1103.7	1093.8	1067.4	1035.2	999.7	954.3	916.3	882.5
27.5°	1179.7	1200.3	1208.6	1203.6	1187.9	1150.8	1107.9	1060.8	1005.5	955.1	911.4
30°	1277.9	1305.2	1320.0	1312.6	1282.0	1233.3	1181.3	1117.8	1047.6	987.3	934.5
32.5°	1381.1	1414.9	1425.7	1410.0	1365.4	1304.3	1236.6	1159.0	1079.8	1010.4	951.0
35°	1495.9	1527.2	1529.7	1499.2	1440.5	1362.9	1278.7	1185.5	1094.6	1017.0	951.8
37.5°	1595.7	1627.1	1624.6	1579.2	1508.2	1411.6	1304.3	1191.2	1085.6	997.2	926.2
40°	1700.6	1735.3	1716.3	1657.7	1566.0	1443.0	1307.6	1171.4	1050.9	954.3	876.7
42.5°	1811.2	1826.1	1792.2	1718.7	1600.7	1442.2	1279.6	1124.4	996.4	889.1	807.4
45°	1912.7	1901.2	1852.5	1754.2	1598.2	1406.7	1224.3	1065.8	923.8	816.4	736.4
47.5°	2003.5	1967.2	1892.1	1754.2	1559.4	1344.0	1153.3	989.8	848.6	740.5	661.2
50°	2101.8	2025.8	1908.6	1723.7	1489.2	1268.0	1078.1	913.9	768.6	657.9	571.3
52.5°	2232.2	2096.0	1908.6	1668.4	1416.6	1191.2	998.9	825.5	675.3	559.7	473.9
55°	2537.7	2243.0	1941.6	1637.8	1352.2	1110.3	904.8	711.6	565.5	454.9	383.9
57.5°	3137.8	2564.9	2107.6	1694.0	1328.3	1022.8	783.4	585.3	446.6	354.2	294.7
60°	3637.3	2824.9	2242.1	1736.9	1289.5	909.7	634.8	448.3	331.9	261.7	222.9
62.5°	3766.0	2828.2	2186.8	1625.5	1132.6	740.5	468.1	308.7	227.8	189.9	169.2
65°	3444.1	2501.3	1859.9	1325.8	862.7	514.3	293.1	187.4	151.9	138.7	130.4
67.5°	2895.1	1992.8	1378.6	924.6	544.0	283.2	164.3	128.8	115.6	111.4	107.3
70°	2220.7	1400.1	897.3	541.5	284.8	146.9	117.2	105.7	99.9	97.4	94.1
72.5°	1368.7	827.2	487.9	260.0	142.0	112.3	104.8	100.7	93.3	90.0	86.7
75°	581.2	355.0	202.3	132.1	113.9	107.3	101.5	96.6	90.8	85.9	82.6
77.5°	195.6	135.4	119.7	115.6	113.9	107.3	99.9	93.3	87.5	81.7	78.4
80°	118.9	108.1	110.6	109.8	113.9	106.5	96.6	89.2	82.6	76.8	72.6
82.5°	103.2	102.4	104.8	107.3	113.1	102.4	90.8	80.1	71.8	66.0	61.9
85°	89.2	90.8	92.5	94.1	97.4	86.7	73.5	63.6	57.0	49.5	46.2
87.5°	59.4	64.4	67.7	68.5	66.0	41.3	23.9	28.1	28.9	24.8	22.3
90°	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: ECM-F03-LED-E1-T2

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	676.1	676.1	676.1	676.1	676.1
2.5°	650.5	649.7	652.2	649.7	649.7
5°	642.3	641.4	641.4	641.4	639.8
7.5°	655.5	654.6	653.8	653.8	653.0
10°	681.1	680.2	680.2	679.4	679.4
12.5°	711.6	708.3	707.5	705.8	706.6
15°	741.3	732.2	729.8	727.3	724.8
17.5°	764.4	753.7	747.9	743.0	743.0
20°	793.3	779.3	771.9	764.4	764.4
22.5°	826.4	807.4	797.5	789.2	785.9
25°	853.6	829.7	815.6	805.7	803.2
27.5°	874.2	843.7	825.5	814.0	810.7
30°	890.7	856.1	834.6	822.2	817.3
32.5°	901.5	863.5	840.4	828.0	823.0
35°	895.7	855.2	827.2	812.3	809.0
37.5°	866.8	823.9	790.9	775.2	769.4
40°	814.0	767.7	733.1	714.1	710.8
42.5°	744.6	698.4	665.4	645.6	636.5
45°	670.3	622.4	591.1	572.9	562.2
47.5°	590.3	543.2	511.0	492.8	485.4
50°	506.0	460.6	433.4	413.6	406.2
52.5°	418.5	378.1	350.8	334.3	326.1
55°	335.2	302.1	279.0	268.3	262.5
57.5°	261.7	240.2	227.0	220.4	216.3
60°	203.1	192.3	187.4	182.4	183.3
62.5°	158.5	156.0	154.4	151.9	152.7
65°	128.0	126.3	127.1	126.3	127.1
67.5°	104.8	105.7	107.3	107.3	108.1
70°	92.5	93.3	94.9	94.9	94.9
72.5°	85.9	87.5	89.2	88.3	88.3
75°	80.9	85.0	88.3	85.0	81.7
77.5°	75.9	85.9	94.9	87.5	78.4
80°	69.3	90.8	101.5	88.3	75.1
82.5°	66.0	87.5	89.2	76.8	66.0
85°	61.1	99.1	103.2	70.2	50.4
87.5°	31.4	59.4	68.5	47.1	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)