

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: P141730

Luminaire Tested: **ECM-E04-LED-E1-T2**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P141730  
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-E04-LED-E1-T2  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 2  
Light Source: (84) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11792.3 lumens  
Efficiency: N/A  
Efficacy: 121.3 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

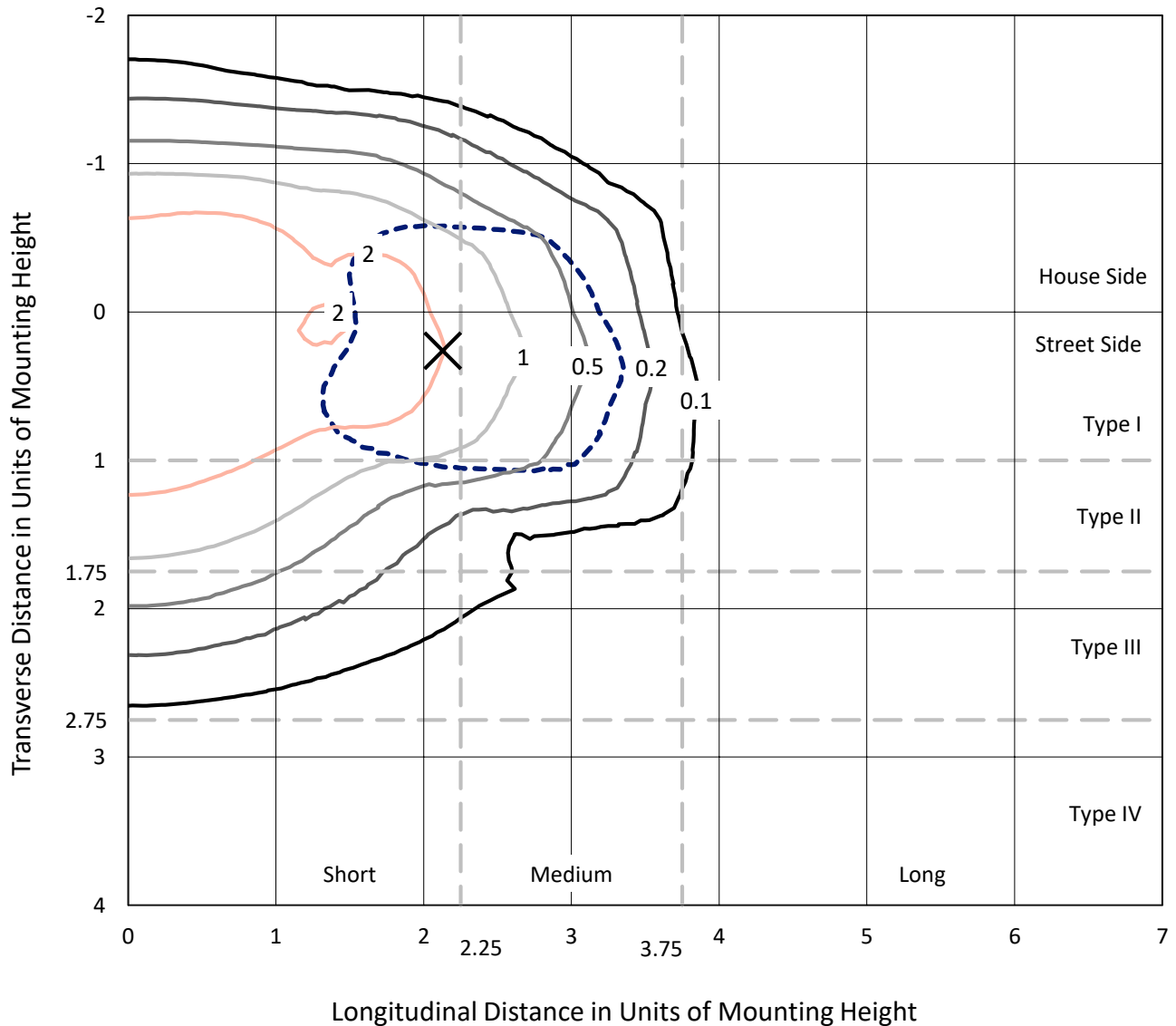
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

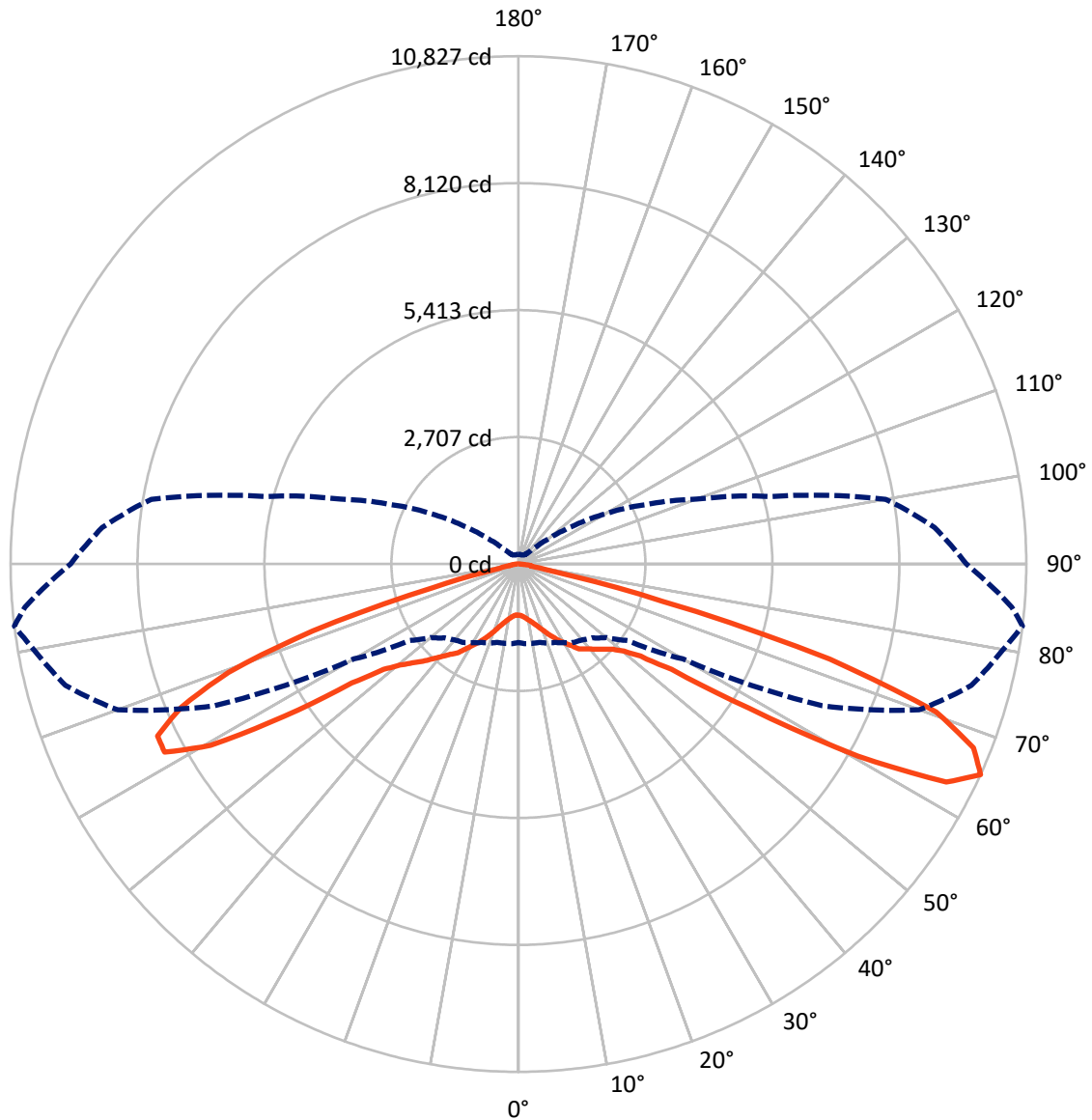
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 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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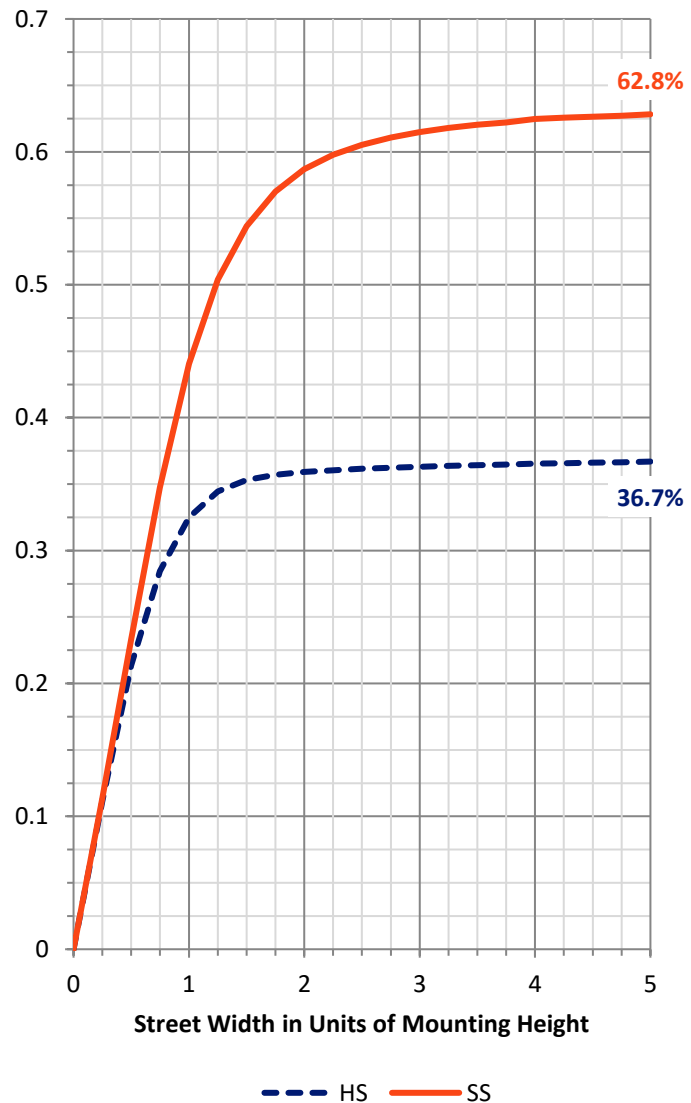
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4374.1	0.0	4374.1
	% Fixture	37.1	0.0	37.1
<b>Street Side</b>	Lumens	7418.2	0.0	7418.2
	% Fixture	62.9	0.0	62.9
<b>Total</b>	Lumens	11792.3	0.0	11792.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.9	0.9
10°-20°	384.9	3.3
20°-30°	760.4	6.4
30°-40°	1308.7	11.1
40°-50°	1974.3	16.7
50°-60°	2747.4	23.3
60°-70°	3171.2	26.9
70°-80°	1152.5	9.8
80°-90°	183.0	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°	11792.3	100.0
0°-180°	11792.3	100.0



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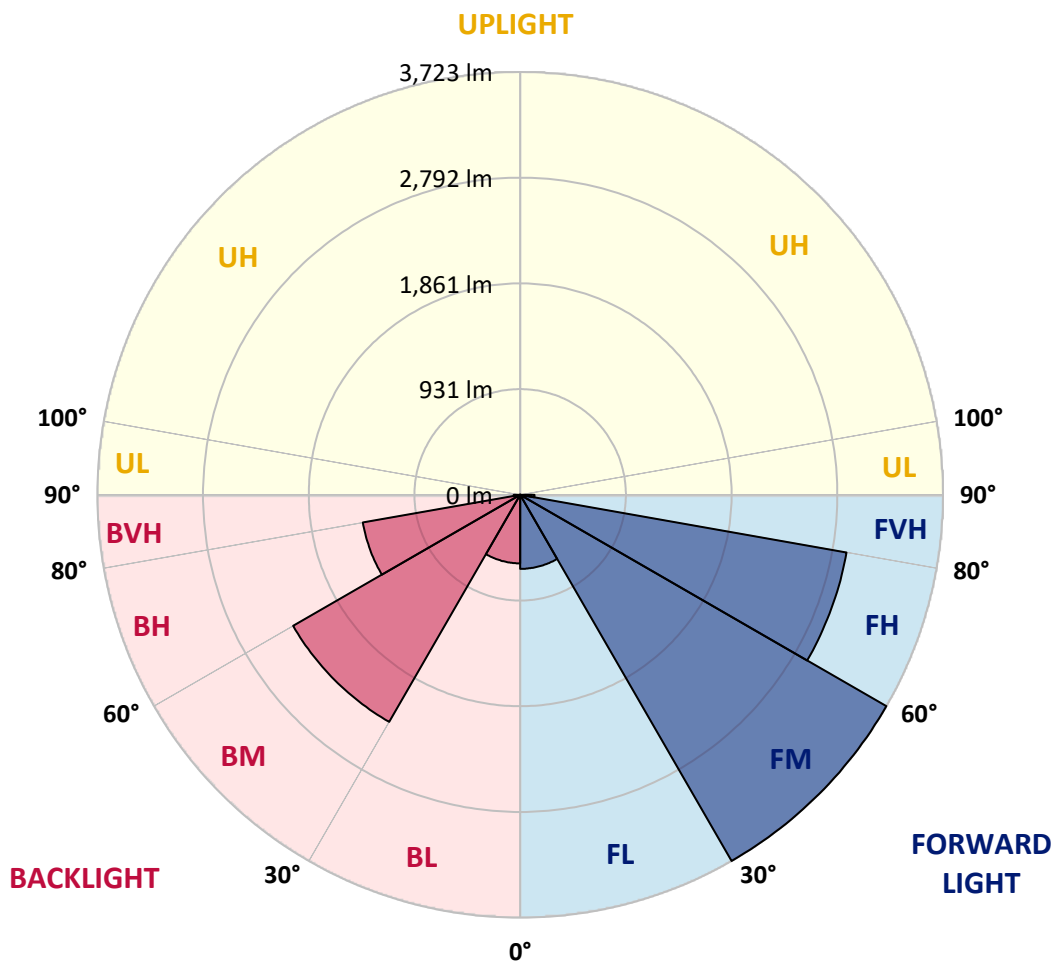
CATALOG NUMBER: ECM-E04-LED-E1-T2

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	651.9	5.5			
FM	(30°-60°)	3722.5	31.6			
FH	(60°-80°)	2917.3	24.7			G2/5000
FVH	(80°-90°)	126.4	1.1			G2/225
BL	(0°-30°)	603.3	5.1	B2/1000		
BM	(30°-60°)	2307.9	19.6	B2/2500		
BH	(60°-80°)	1406.4	11.9	B3/2500		G3/2500
BVH	(80°-90°)	56.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0
2.5°	1145.3	1148.0	1145.3	1145.3	1144.0	1142.7	1142.7	1141.3	1138.7	1136.0	1134.7
5°	1208.0	1209.3	1205.3	1205.3	1206.7	1205.3	1201.3	1202.7	1192.0	1188.0	1185.3
7.5°	1277.3	1281.3	1276.0	1273.3	1272.0	1269.3	1265.3	1258.7	1250.7	1244.0	1240.0
10°	1356.0	1360.0	1357.3	1352.0	1344.0	1340.0	1336.0	1325.3	1316.0	1305.3	1297.3
12.5°	1449.3	1450.7	1448.0	1437.3	1432.0	1420.0	1406.7	1394.7	1381.3	1365.3	1352.0
15°	1541.3	1542.7	1538.7	1528.0	1521.3	1506.7	1488.0	1472.0	1449.3	1430.7	1413.3
17.5°	1612.0	1614.7	1606.7	1598.7	1589.3	1570.7	1553.3	1534.7	1510.7	1490.7	1473.3
20°	1636.0	1640.0	1634.7	1630.7	1625.3	1616.0	1598.7	1582.7	1561.3	1546.7	1533.3
22.5°	1625.3	1629.3	1626.7	1626.7	1626.7	1625.3	1617.3	1613.3	1600.0	1593.3	1590.7
25°	1609.3	1613.3	1610.7	1613.3	1618.7	1625.3	1625.3	1633.3	1632.0	1642.7	1649.3
27.5°	1650.7	1653.3	1646.7	1646.7	1652.0	1662.7	1660.0	1676.0	1678.7	1700.0	1720.0
30°	1794.7	1794.7	1784.0	1773.3	1777.3	1774.7	1772.0	1782.7	1782.7	1802.7	1812.0
32.5°	2009.3	1994.7	1993.3	1992.0	1982.7	1989.3	1968.0	1969.3	1960.0	1962.7	1958.7
35°	2245.3	2244.0	2238.7	2236.0	2232.0	2252.0	2236.0	2249.3	2216.0	2204.0	2181.3
37.5°	2452.0	2457.3	2461.3	2481.3	2490.7	2530.7	2540.0	2546.7	2512.0	2513.3	2462.7
40°	2660.0	2666.7	2681.3	2717.3	2744.0	2781.3	2798.7	2826.7	2829.3	2834.7	2797.3
42.5°	2886.7	2876.0	2896.0	2941.3	2974.7	3012.0	3034.7	3086.7	3116.0	3130.7	3136.0
45°	3069.3	3057.3	3066.7	3093.3	3124.0	3172.0	3221.3	3298.7	3361.3	3429.3	3466.7
47.5°	3164.0	3166.7	3173.3	3189.3	3210.7	3257.3	3326.7	3425.3	3526.7	3636.0	3733.3
50°	3194.7	3196.0	3205.3	3221.3	3241.3	3290.7	3362.7	3474.7	3597.3	3750.7	3900.0
52.5°	3204.0	3198.7	3208.0	3216.0	3229.3	3270.7	3338.7	3456.0	3594.7	3780.0	4001.3
55°	3169.3	3162.7	3178.7	3189.3	3200.0	3233.3	3285.3	3393.3	3537.3	3748.0	4037.3
57.5°	3036.0	3037.3	3060.0	3088.0	3116.0	3161.3	3229.3	3332.0	3474.7	3682.7	4006.7
60°	2810.7	2806.7	2834.7	2869.3	2917.3	2989.3	3073.3	3177.3	3296.0	3469.3	3788.0
62.5°	2401.3	2417.3	2426.7	2478.7	2481.3	2584.0	2638.7	2742.7	2844.0	2977.3	3264.0
65°	1672.0	1706.7	1716.0	1729.3	1792.0	1845.3	1933.3	2042.7	2109.3	2226.7	2440.0
67.5°	1041.3	1066.7	1068.0	1102.7	1157.3	1218.7	1286.7	1397.3	1498.7	1517.3	1624.0
70°	864.0	865.3	884.0	909.3	952.0	1014.7	1081.3	1158.7	1250.7	1309.3	1298.7
72.5°	716.0	724.0	737.3	762.7	809.3	865.3	950.7	1049.3	1164.0	1281.3	1385.3
75°	480.0	493.3	497.3	509.3	532.0	582.7	646.7	740.0	888.0	1062.7	1284.0
77.5°	254.7	257.3	266.7	276.0	288.0	318.7	360.0	408.0	505.3	656.0	916.0
80°	129.3	134.7	141.3	148.0	146.7	154.7	166.7	188.0	221.3	288.0	414.7
82.5°	46.7	60.0	78.7	88.0	88.0	90.7	94.7	98.7	96.0	106.7	133.3
85°	21.3	24.0	30.7	48.0	49.3	49.3	49.3	52.0	49.3	44.0	52.0
87.5°	0.0	4.0	4.0	12.0	13.3	12.0	13.3	17.3	13.3	10.7	9.3
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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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	83°	85°	90°	95°	100°
0°	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0
2.5°	1128.0	1125.3	1118.7	1116.0	1108.0	1102.7	1100.0	1097.3	1093.3	1088.0	1084.0
5°	1177.3	1169.3	1160.0	1154.7	1144.0	1133.3	1129.3	1124.0	1114.7	1106.7	1097.3
7.5°	1229.3	1220.0	1209.3	1197.3	1186.7	1174.7	1169.3	1164.0	1150.7	1140.0	1126.7
10°	1285.3	1272.0	1260.0	1249.3	1240.0	1226.7	1217.3	1213.3	1201.3	1185.3	1172.0
12.5°	1338.7	1324.0	1312.0	1298.7	1289.3	1278.7	1269.3	1265.3	1256.0	1241.3	1230.7
15°	1394.7	1380.0	1366.7	1357.3	1346.7	1340.0	1334.7	1328.0	1324.0	1312.0	1306.7
17.5°	1454.7	1441.3	1429.3	1421.3	1417.3	1416.0	1414.7	1412.0	1408.0	1400.0	1396.0
20°	1522.7	1510.7	1506.7	1505.3	1506.7	1508.0	1510.7	1510.7	1512.0	1506.7	1505.3
22.5°	1588.0	1588.0	1594.7	1602.7	1610.7	1616.0	1620.0	1614.7	1616.0	1624.0	1630.7
25°	1660.0	1672.0	1689.3	1702.7	1714.7	1724.0	1729.3	1732.0	1734.7	1746.7	1758.7
27.5°	1737.3	1756.0	1781.3	1798.7	1821.3	1836.0	1846.7	1845.3	1849.3	1865.3	1886.7
30°	1833.3	1852.0	1878.7	1902.7	1933.3	1954.7	1958.7	1956.0	1961.3	1976.0	2018.7
32.5°	1968.0	1972.0	1989.3	2013.3	2046.7	2068.0	2072.0	2078.7	2090.7	2117.3	2169.3
35°	2157.3	2140.0	2138.7	2149.3	2181.3	2222.7	2226.7	2230.7	2236.0	2270.7	2340.0
37.5°	2413.3	2342.7	2300.0	2266.7	2270.7	2285.3	2293.3	2296.0	2309.3	2362.7	2480.0
40°	2734.7	2602.7	2508.0	2413.3	2378.7	2381.3	2384.0	2381.3	2408.0	2490.7	2644.0
42.5°	3086.7	2970.7	2805.3	2609.3	2510.7	2478.7	2482.7	2485.3	2526.7	2646.7	2817.3
45°	3460.0	3385.3	3193.3	2886.7	2674.7	2593.3	2590.7	2596.0	2664.0	2833.3	3013.3
47.5°	3788.0	3806.7	3665.3	3305.3	2941.3	2734.7	2717.3	2726.7	2837.3	3018.7	3201.3
50°	4048.0	4170.7	4160.0	3874.7	3373.3	2978.7	2917.3	2930.7	3061.3	3249.3	3413.3
52.5°	4244.0	4493.3	4653.3	4540.0	4104.0	3421.3	3262.7	3240.0	3404.0	3602.7	3704.0
55°	4374.7	4778.7	5198.7	5394.7	5217.3	4377.3	3962.7	3913.3	4090.7	4344.0	4388.0
57.5°	4461.3	5125.3	6029.3	6786.7	7028.0	6308.0	5788.0	5581.3	5710.7	5978.7	5921.3
60°	4317.3	5262.7	7032.0	8389.3	9076.0	8897.3	8318.7	8006.7	7765.3	7745.3	7426.7
62.5°	3765.3	4936.0	7438.7	9152.0	10117.3	10340.0	10237.3	9868.0	9200.0	8829.3	8109.3
65°	2840.0	4044.0	7149.3	9093.3	9998.7	10492.0	10826.7	10561.3	9548.0	8906.7	7949.3
67.5°	1814.7	2610.7	5946.7	8388.0	9238.7	9793.3	10462.7	10341.3	9046.7	8228.0	7186.7
70°	1325.3	1446.7	4034.7	7100.0	8036.0	8524.0	9444.0	9390.7	7933.3	7013.3	5981.3
72.5°	1526.7	1078.7	2212.0	5304.0	6028.0	6412.0	6938.7	6809.3	5542.7	4904.0	4173.3
75°	1721.3	1206.7	1246.7	3146.7	3368.0	3098.7	3170.7	2753.3	2148.0	1904.0	1876.0
77.5°	1449.3	1513.3	1130.7	1352.0	1245.3	897.3	672.0	526.7	412.0	442.7	492.0
80°	842.7	1701.3	1496.0	704.0	789.3	628.0	280.0	232.0	192.0	194.7	197.3
82.5°	260.0	1062.7	2105.3	860.0	781.3	885.3	257.3	157.3	126.7	142.7	161.3
85°	86.7	445.3	1688.0	902.7	505.3	472.0	113.3	77.3	64.0	89.3	126.7
87.5°	21.3	108.0	313.3	118.7	74.7	45.3	38.7	28.0	30.7	56.0	78.7
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°	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0	1092.0
2.5°	1081.3	1077.3	1073.3	1070.7	1066.7	1066.7	1062.7	1062.7	1057.3	1054.7	1054.7
5°	1089.3	1081.3	1074.7	1068.0	1061.3	1058.7	1053.3	1050.7	1045.3	1041.3	1038.7
7.5°	1116.0	1105.3	1097.3	1089.3	1081.3	1077.3	1072.0	1066.7	1065.3	1062.7	1060.0
10°	1161.3	1146.7	1140.0	1134.7	1124.0	1121.3	1116.0	1112.0	1108.0	1104.0	1105.3
12.5°	1220.0	1209.3	1206.7	1196.0	1193.3	1189.3	1181.3	1178.7	1168.0	1160.0	1156.0
15°	1294.7	1290.7	1290.7	1285.3	1277.3	1270.7	1258.7	1252.0	1233.3	1221.3	1208.0
17.5°	1393.3	1389.3	1390.7	1385.3	1376.0	1364.0	1350.7	1330.7	1302.7	1281.3	1254.7
20°	1508.0	1506.7	1509.3	1505.3	1493.3	1477.3	1445.3	1416.0	1377.3	1338.7	1309.3
22.5°	1636.0	1642.7	1645.3	1634.7	1621.3	1588.0	1553.3	1510.7	1458.7	1408.0	1366.7
25°	1772.0	1788.0	1797.3	1782.7	1766.7	1724.0	1672.0	1614.7	1541.3	1480.0	1425.3
27.5°	1905.3	1938.7	1952.0	1944.0	1918.7	1858.7	1789.3	1713.3	1624.0	1542.7	1472.0
30°	2064.0	2108.0	2132.0	2120.0	2070.7	1992.0	1908.0	1805.3	1692.0	1594.7	1509.3
32.5°	2230.7	2285.3	2302.7	2277.3	2205.3	2106.7	1997.3	1872.0	1744.0	1632.0	1536.0
35°	2416.0	2466.7	2470.7	2421.3	2326.7	2201.3	2065.3	1914.7	1768.0	1642.7	1537.3
37.5°	2577.3	2628.0	2624.0	2550.7	2436.0	2280.0	2106.7	1924.0	1753.3	1610.7	1496.0
40°	2746.7	2802.7	2772.0	2677.3	2529.3	2330.7	2112.0	1892.0	1697.3	1541.3	1416.0
42.5°	2925.3	2949.3	2894.7	2776.0	2585.3	2329.3	2066.7	1816.0	1609.3	1436.0	1304.0
45°	3089.3	3070.7	2992.0	2833.3	2581.3	2272.0	1977.3	1721.3	1492.0	1318.7	1189.3
47.5°	3236.0	3177.3	3056.0	2833.3	2518.7	2170.7	1862.7	1598.7	1370.7	1196.0	1068.0
50°	3394.7	3272.0	3082.7	2784.0	2405.3	2048.0	1741.3	1476.0	1241.3	1062.7	922.7
52.5°	3605.3	3385.3	3082.7	2694.7	2288.0	1924.0	1613.3	1333.3	1090.7	904.0	765.3
55°	4098.7	3622.7	3136.0	2645.3	2184.0	1793.3	1461.3	1149.3	913.3	734.7	620.0
57.5°	5068.0	4142.7	3404.0	2736.0	2145.3	1652.0	1265.3	945.3	721.3	572.0	476.0
60°	5874.7	4562.7	3621.3	2805.3	2082.7	1469.3	1025.3	724.0	536.0	422.7	360.0
62.5°	6082.7	4568.0	3532.0	2625.3	1829.3	1196.0	756.0	498.7	368.0	306.7	273.3
65°	5562.7	4040.0	3004.0	2141.3	1393.3	830.7	473.3	302.7	245.3	224.0	210.7
67.5°	4676.0	3218.7	2226.7	1493.3	878.7	457.3	265.3	208.0	186.7	180.0	173.3
70°	3586.7	2261.3	1449.3	874.7	460.0	237.3	189.3	170.7	161.3	157.3	152.0
72.5°	2210.7	1336.0	788.0	420.0	229.3	181.3	169.3	162.7	150.7	145.3	140.0
75°	938.7	573.3	326.7	213.3	184.0	173.3	164.0	156.0	146.7	138.7	133.3
77.5°	316.0	218.7	193.3	186.7	184.0	173.3	161.3	150.7	141.3	132.0	126.7
80°	192.0	174.7	178.7	177.3	184.0	172.0	156.0	144.0	133.3	124.0	117.3
82.5°	166.7	165.3	169.3	173.3	182.7	165.3	146.7	129.3	116.0	106.7	100.0
85°	144.0	146.7	149.3	152.0	157.3	140.0	118.7	102.7	92.0	80.0	74.7
87.5°	96.0	104.0	109.3	110.7	106.7	66.7	38.7	45.3	46.7	40.0	36.0
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-E04-LED-E1-T2

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	1092.0	1092.0	1092.0	1092.0	1092.0
2.5°	1050.7	1049.3	1053.3	1049.3	1049.3
5°	1037.3	1036.0	1036.0	1036.0	1033.3
7.5°	1058.7	1057.3	1056.0	1056.0	1054.7
10°	1100.0	1098.7	1098.7	1097.3	1097.3
12.5°	1149.3	1144.0	1142.7	1140.0	1141.3
15°	1197.3	1182.7	1178.7	1174.7	1170.7
17.5°	1234.7	1217.3	1208.0	1200.0	1200.0
20°	1281.3	1258.7	1246.7	1234.7	1234.7
22.5°	1334.7	1304.0	1288.0	1274.7	1269.3
25°	1378.7	1340.0	1317.3	1301.3	1297.3
27.5°	1412.0	1362.7	1333.3	1314.7	1309.3
30°	1438.7	1382.7	1348.0	1328.0	1320.0
32.5°	1456.0	1394.7	1357.3	1337.3	1329.3
35°	1446.7	1381.3	1336.0	1312.0	1306.7
37.5°	1400.0	1330.7	1277.3	1252.0	1242.7
40°	1314.7	1240.0	1184.0	1153.3	1148.0
42.5°	1202.7	1128.0	1074.7	1042.7	1028.0
45°	1082.7	1005.3	954.7	925.3	908.0
47.5°	953.3	877.3	825.3	796.0	784.0
50°	817.3	744.0	700.0	668.0	656.0
52.5°	676.0	610.7	566.7	540.0	526.7
55°	541.3	488.0	450.7	433.3	424.0
57.5°	422.7	388.0	366.7	356.0	349.3
60°	328.0	310.7	302.7	294.7	296.0
62.5°	256.0	252.0	249.3	245.3	246.7
65°	206.7	204.0	205.3	204.0	205.3
67.5°	169.3	170.7	173.3	173.3	174.7
70°	149.3	150.7	153.3	153.3	153.3
72.5°	138.7	141.3	144.0	142.7	142.7
75°	130.7	137.3	142.7	137.3	132.0
77.5°	122.7	138.7	153.3	141.3	126.7
80°	112.0	146.7	164.0	142.7	121.3
82.5°	106.7	141.3	144.0	124.0	106.7
85°	98.7	160.0	166.7	113.3	81.3
87.5°	50.7	96.0	110.7	76.0	41.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)