

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: P141090

Luminaire Tested: **ECM-E04-LED-E1-SL3**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P141090  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33691)  
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-SL3  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL  
Light Source: (84) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11575.5 lumens  
Efficiency: N/A  
Efficacy: 119.1 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

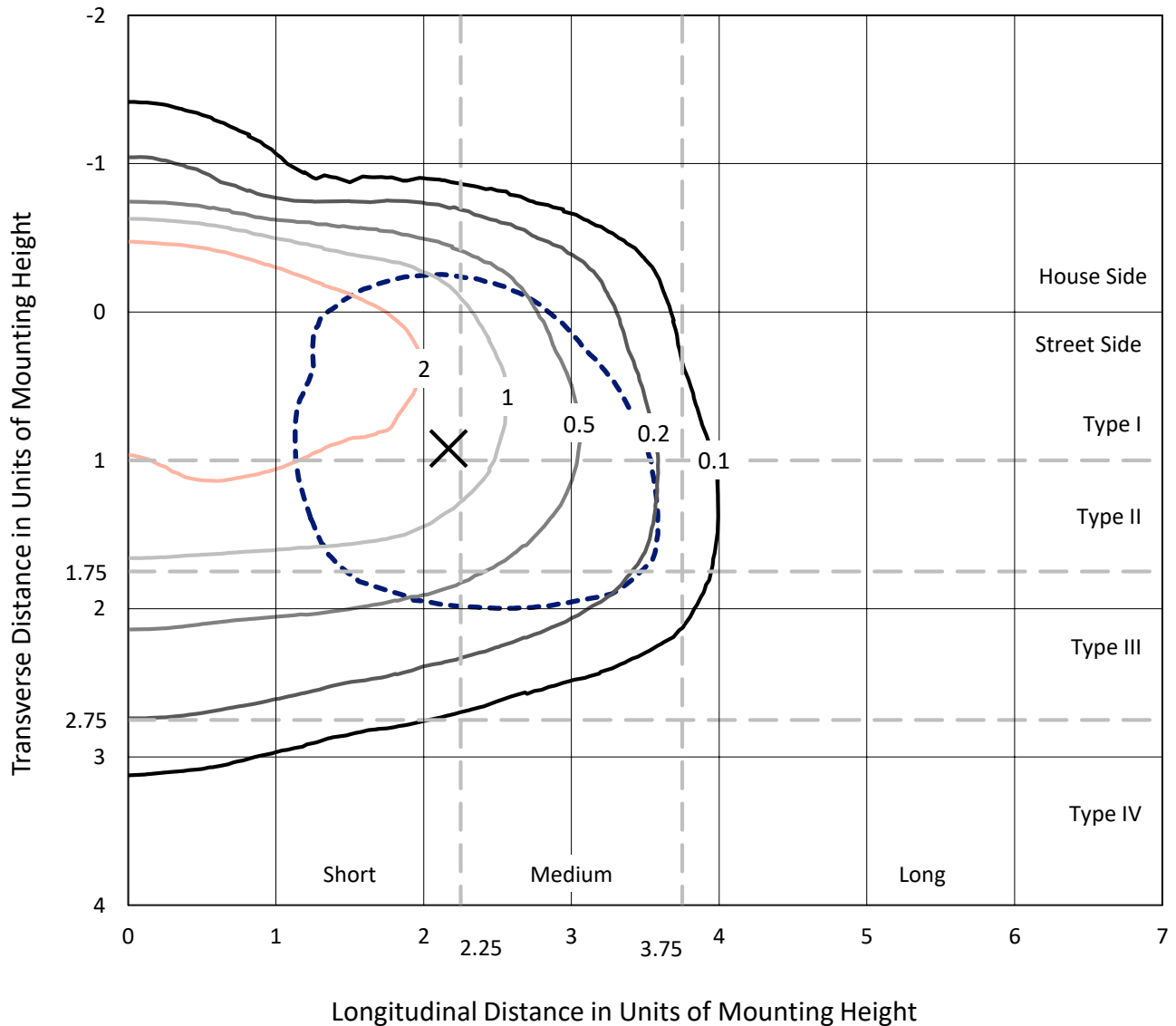
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P141090  
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### Iso-Footcandle Lines of Horizontal Illumination

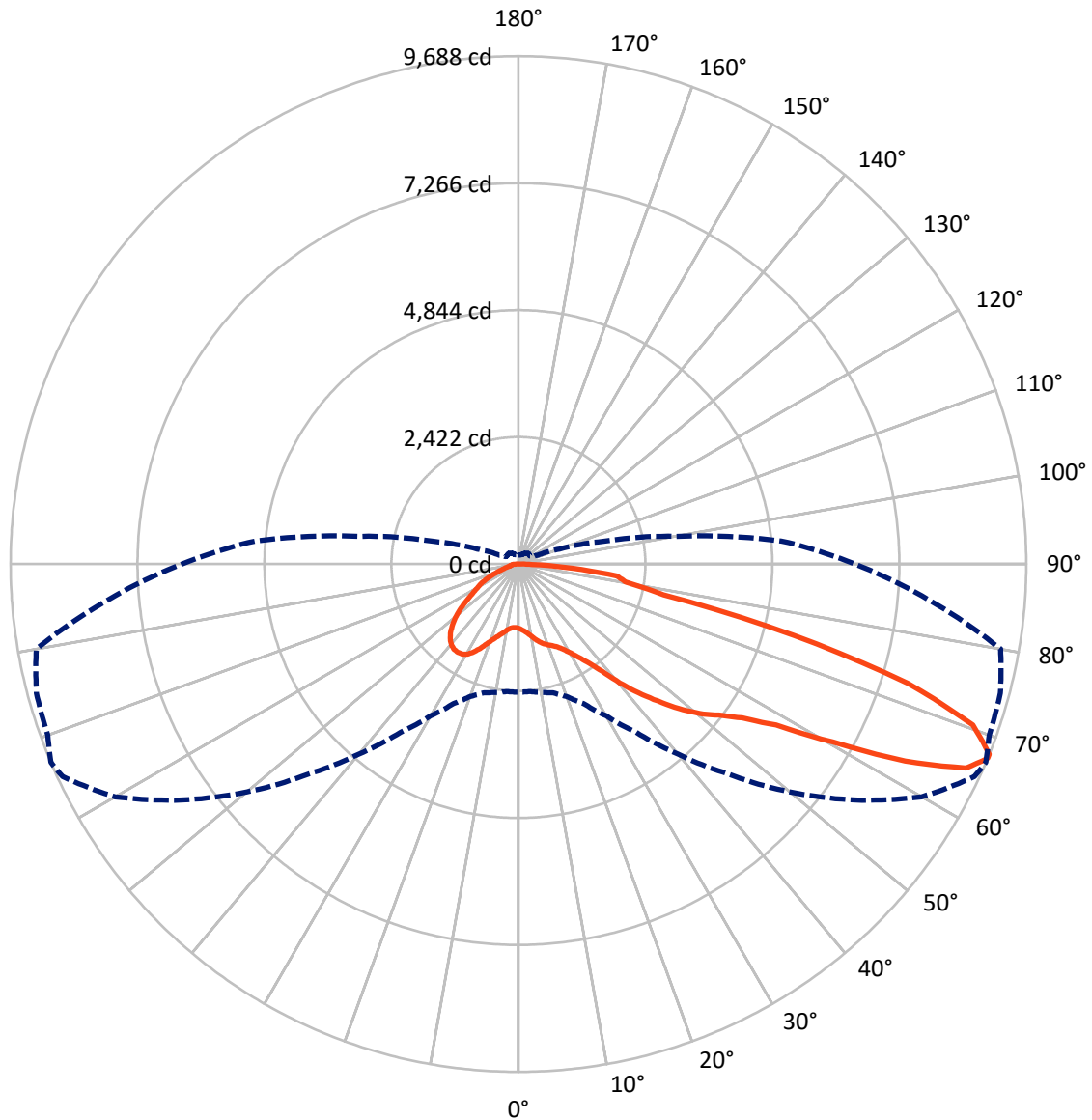
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4 fc  
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P141090  
CATALOG NUMBER: ECM-E04-LED-E1-SL3

### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2663.0	0.0	2663.0
	% Fixture	23.0	0.0	23.0
<b>Street Side</b>	Lumens	8912.5	0.0	8912.5
	% Fixture	77.0	0.0	77.0
<b>Total</b>	Lumens	11575.5	0.0	11575.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.1	1.1
10°-20°	425.6	3.7
20°-30°	757.7	6.5
30°-40°	1089.3	9.4
40°-50°	1660.1	14.3
50°-60°	2425.0	20.9
60°-70°	3267.5	28.2
70°-80°	1604.2	13.9
80°-90°	223.1	1.9
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°	11575.5	100.0
0°-180°	11575.5	100.0



REPORT NUMBER: P141090

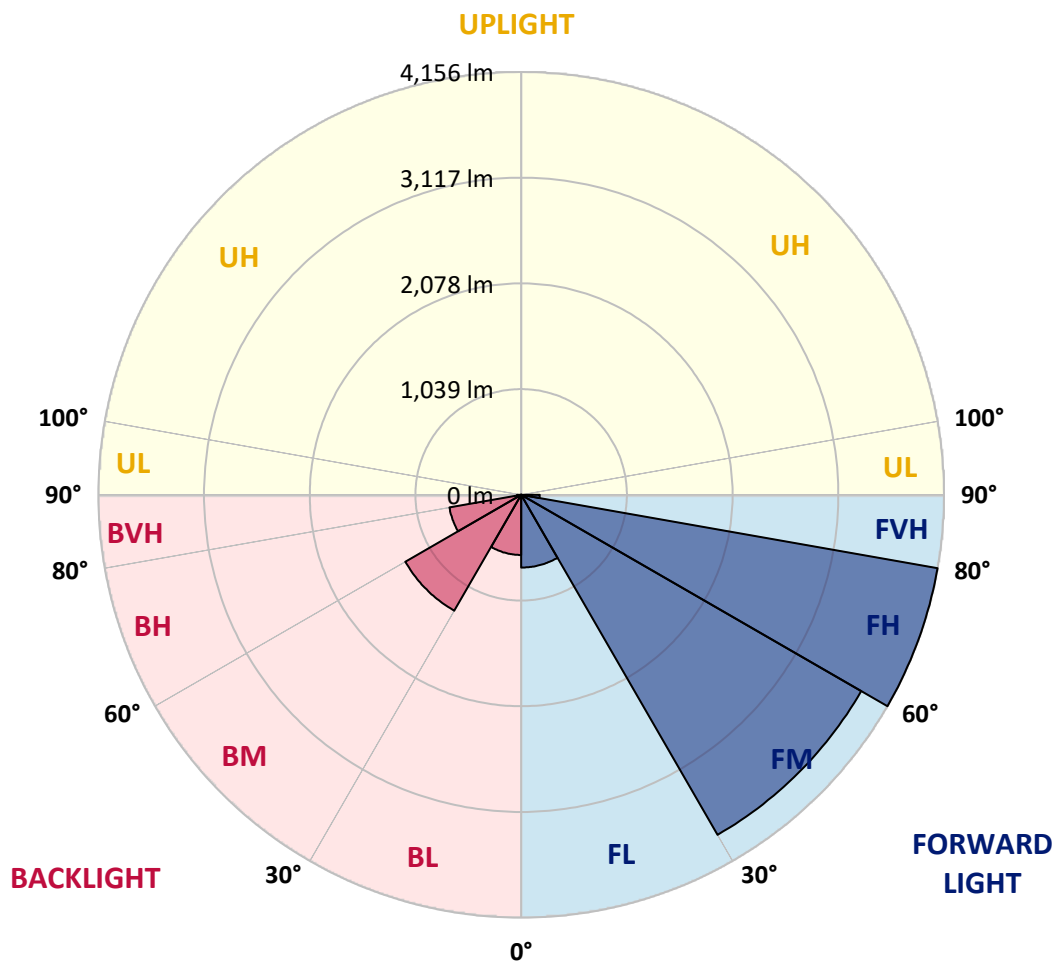
CATALOG NUMBER: ECM-E04-LED-E1-SL3

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	715.0	6.2			
FM	(30°-60°)	3859.0	33.3			
FH	(60°-80°)	4155.6	35.9			G2/5000
FVH	(80°-90°)	182.9	1.6			G2/225
BL	(0°-30°)	591.4	5.1	B2/1000		
BM	(30°-60°)	1315.4	11.4	B2/2500		
BH	(60°-80°)	716.1	6.2	B2/1000		G2/1000
BVH	(80°-90°)	40.2	0.3			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 III Short





REPORT NUMBER: P141090

CATALOG NUMBER: ECM-E04-LED-E1-SL3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0
2.5°	1292.0	1285.3	1290.7	1289.3	1285.3	1280.0	1282.7	1278.7	1276.0	1272.0	1268.0
5°	1376.0	1372.0	1369.3	1365.3	1362.7	1358.7	1356.0	1349.3	1340.0	1333.3	1328.0
7.5°	1458.7	1457.3	1453.3	1448.0	1437.3	1434.7	1425.3	1418.7	1410.7	1397.3	1386.7
10°	1556.0	1554.7	1548.0	1540.0	1528.0	1516.0	1505.3	1489.3	1473.3	1461.3	1452.0
12.5°	1673.3	1666.7	1653.3	1642.7	1629.3	1610.7	1593.3	1574.7	1552.0	1533.3	1522.7
15°	1790.7	1782.7	1772.0	1757.3	1737.3	1712.0	1686.7	1658.7	1624.0	1600.0	1585.3
17.5°	1886.7	1881.3	1869.3	1849.3	1829.3	1798.7	1765.3	1726.7	1684.0	1648.0	1625.3
20°	1956.0	1950.7	1932.0	1908.0	1881.3	1846.7	1810.7	1768.0	1717.3	1673.3	1648.0
22.5°	1985.3	1977.3	1956.0	1924.0	1888.0	1845.3	1806.7	1770.7	1724.0	1690.7	1664.0
25°	1994.7	1985.3	1957.3	1917.3	1870.7	1816.0	1772.0	1744.0	1716.0	1704.0	1694.7
27.5°	1989.3	1981.3	1950.7	1901.3	1838.7	1774.7	1728.0	1708.0	1709.3	1732.0	1742.7
30°	1970.7	1961.3	1933.3	1878.7	1812.0	1742.7	1701.3	1694.7	1725.3	1782.7	1825.3
32.5°	1940.0	1933.3	1910.7	1864.0	1804.0	1744.0	1714.7	1729.3	1782.7	1872.0	1945.3
35°	1932.0	1930.7	1920.0	1894.7	1850.7	1812.0	1800.0	1841.3	1929.3	2052.0	2145.3
37.5°	1930.7	1937.3	1942.7	1942.7	1933.3	1930.7	1966.7	2024.0	2154.7	2308.0	2460.0
40°	1957.3	1969.3	1996.0	2030.7	2064.0	2112.0	2185.3	2293.3	2429.3	2616.0	2805.3
42.5°	2040.0	2066.7	2112.0	2172.0	2258.7	2348.0	2466.7	2601.3	2776.0	2964.0	3152.0
45°	2201.3	2240.0	2273.3	2368.0	2482.7	2588.0	2742.7	2920.0	3112.0	3348.0	3550.7
47.5°	2414.7	2442.7	2512.0	2612.0	2752.0	2902.7	3052.0	3206.7	3437.3	3684.0	3929.3
50°	2628.0	2649.3	2722.7	2840.0	3024.0	3189.3	3360.0	3513.3	3712.0	3973.3	4213.3
52.5°	2786.7	2816.0	2880.0	2994.7	3201.3	3389.3	3584.0	3753.3	3977.3	4212.0	4462.7
55°	2896.0	2914.7	2973.3	3085.3	3280.0	3494.7	3714.7	3922.7	4189.3	4454.7	4704.0
57.5°	2913.3	2932.0	2985.3	3084.0	3273.3	3498.7	3750.7	4005.3	4328.0	4678.7	5005.3
60°	2893.3	2908.0	2954.7	3036.0	3214.7	3461.3	3761.3	4081.3	4478.7	4930.7	5397.3
62.5°	2804.0	2818.7	2861.3	2928.0	3086.7	3353.3	3729.3	4193.3	4693.3	5261.3	5945.3
65°	2636.0	2645.3	2685.3	2738.7	2898.7	3169.3	3584.0	4170.7	4862.7	5636.0	6521.3
67°	2445.3	2441.3	2486.7	2540.0	2686.7	2936.0	3341.3	3918.7	4728.0	5665.3	6762.7
67.5°	2386.7	2397.3	2441.3	2478.7	2621.3	2862.7	3250.7	3821.3	4613.3	5598.7	6758.7
70°	1970.7	1990.7	2014.7	2038.7	2164.0	2341.3	2626.7	3178.7	3818.7	4752.0	6136.0
72.5°	1352.0	1312.0	1329.3	1321.3	1360.0	1472.0	1670.7	2156.0	2664.0	3466.7	4554.7
75°	685.3	729.3	724.0	757.3	812.0	882.7	974.7	1156.0	1554.7	2026.7	2818.7
77.5°	384.0	373.3	410.7	418.7	450.7	525.3	688.0	926.7	1109.3	1302.7	1593.3
80°	174.7	193.3	205.3	186.7	193.3	209.3	272.0	426.7	717.3	1092.0	1256.0
82.5°	97.3	104.0	121.3	122.7	128.0	132.0	142.7	165.3	222.7	450.7	886.7
85°	61.3	64.0	81.3	89.3	93.3	93.3	93.3	98.7	113.3	133.3	229.3
87.5°	22.7	24.0	37.3	49.3	50.7	48.0	45.3	52.0	48.0	49.3	74.7
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: P141090

CATALOG NUMBER: ECM-E04-LED-E1-SL3

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	67°	70°	75°	80°	85°	90°	95°	100°
0°	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0
2.5°	1265.3	1260.0	1254.7	1253.3	1249.3	1246.7	1240.0	1234.7	1229.3	1225.3	1221.3
5°	1316.0	1305.3	1296.0	1292.0	1286.7	1280.0	1266.7	1257.3	1249.3	1241.3	1233.3
7.5°	1373.3	1360.0	1346.7	1341.3	1333.3	1321.3	1306.7	1296.0	1282.7	1270.7	1260.0
10°	1437.3	1422.7	1412.0	1406.7	1400.0	1382.7	1373.3	1354.7	1340.0	1324.0	1310.7
12.5°	1506.7	1500.0	1485.3	1480.0	1473.3	1461.3	1448.0	1432.0	1413.3	1396.0	1380.0
15°	1569.3	1558.7	1549.3	1548.0	1544.0	1537.3	1520.0	1502.7	1486.7	1464.0	1450.7
17.5°	1608.0	1604.0	1602.7	1601.3	1598.7	1594.7	1586.7	1568.0	1553.3	1534.7	1516.0
20°	1632.0	1636.0	1642.7	1648.0	1650.7	1653.3	1649.3	1630.7	1616.0	1600.0	1584.0
22.5°	1657.3	1668.0	1685.3	1693.3	1702.7	1716.0	1713.3	1701.3	1693.3	1674.7	1662.7
25°	1693.3	1714.7	1744.0	1754.7	1772.0	1789.3	1793.3	1786.7	1778.7	1765.3	1765.3
27.5°	1754.7	1785.3	1824.0	1846.7	1864.0	1888.0	1896.0	1892.0	1893.3	1885.3	1904.0
30°	1850.7	1893.3	1945.3	1969.3	1990.7	2018.7	2024.0	2032.0	2026.7	2041.3	2064.0
32.5°	1996.0	2049.3	2102.7	2125.3	2144.0	2173.3	2190.7	2185.3	2204.0	2213.3	2245.3
35°	2220.0	2273.3	2314.7	2318.7	2340.0	2356.0	2372.0	2366.7	2417.3	2437.3	2454.7
37.5°	2529.3	2574.7	2600.0	2590.7	2565.3	2596.0	2617.3	2649.3	2681.3	2717.3	2653.3
40°	2930.7	3002.7	2992.0	2978.7	2930.7	2937.3	2946.7	2964.0	3017.3	3005.3	2822.7
42.5°	3312.0	3385.3	3373.3	3358.7	3294.7	3261.3	3286.7	3317.3	3346.7	3233.3	2961.3
45°	3697.3	3764.0	3706.7	3726.7	3669.3	3654.7	3704.0	3721.3	3688.0	3480.0	3078.7
47.5°	4097.3	4169.3	4141.3	4121.3	4080.0	4076.0	4104.0	4130.7	3998.7	3658.7	3166.7
50°	4404.0	4510.7	4496.0	4484.0	4438.7	4433.3	4500.0	4518.7	4281.3	3848.0	3254.7
52.5°	4640.0	4778.7	4805.3	4789.3	4778.7	4781.3	4973.3	4945.3	4617.3	4077.3	3357.3
55°	4918.7	5062.7	5160.0	5180.0	5206.7	5245.3	5625.3	5584.0	5081.3	4408.0	3465.3
57.5°	5288.0	5554.7	5701.3	5792.0	5865.3	6116.0	6598.7	6440.0	5724.0	4834.7	3593.3
60°	5832.0	6361.3	6665.3	6896.0	7041.3	7478.7	8064.0	7480.0	6470.7	5346.7	3761.3
62.5°	6705.3	7569.3	8150.7	8281.3	8342.7	8758.7	9177.3	8276.0	7009.3	5685.3	3788.0
65°	7552.0	8632.0	9310.7	9386.7	9341.3	9453.3	9570.7	8300.0	6884.0	5525.3	3476.0
67°	7850.7	8882.7	9596.0	9688.0	9554.7	9518.7	9340.0	7862.7	6416.0	5034.7	3041.3
67.5°	7834.7	8853.3	9593.3	9686.7	9554.7	9497.3	9234.7	7686.7	6232.0	4914.7	2957.3
70°	7221.3	8200.0	9024.0	9198.7	9125.3	8973.3	8274.7	6510.7	5164.0	4032.0	2280.0
72.5°	5862.7	6920.0	7573.3	7766.7	7818.7	7428.0	6162.7	4557.3	3722.7	2881.3	1653.3
75°	3936.0	4986.7	5521.3	5424.0	5108.0	4442.7	3253.3	2404.0	2040.0	1676.0	1022.7
77.5°	2232.0	3042.7	3001.3	2833.3	2566.7	1900.0	922.7	500.0	477.3	557.3	433.3
80°	1490.7	1876.0	2004.0	2069.3	2054.7	1405.3	381.3	193.3	166.7	166.7	164.0
82.5°	1244.0	1621.3	1836.0	1893.3	1764.0	1068.0	228.0	126.7	101.3	113.3	126.7
85°	524.0	817.3	1081.3	1040.0	826.7	416.0	116.0	66.7	66.7	88.0	110.7
87.5°	126.7	188.0	265.3	257.3	206.7	96.0	58.7	41.3	41.3	68.0	96.0
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: P141090

CATALOG NUMBER: ECM-E04-LED-E1-SL3

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0	1228.0
2.5°	1220.0	1214.7	1214.7	1209.3	1206.7	1204.0	1202.7	1204.0	1200.0	1196.0	1197.3
5°	1226.7	1218.7	1214.7	1205.3	1200.0	1194.7	1190.7	1189.3	1182.7	1178.7	1178.7
7.5°	1249.3	1238.7	1230.7	1220.0	1209.3	1201.3	1194.7	1190.7	1181.3	1174.7	1173.3
10°	1296.0	1281.3	1269.3	1253.3	1238.7	1228.0	1216.0	1209.3	1198.7	1192.0	1189.3
12.5°	1365.3	1344.0	1325.3	1301.3	1284.0	1268.0	1261.3	1250.7	1246.7	1242.7	1244.0
15°	1430.7	1405.3	1388.0	1369.3	1349.3	1340.0	1326.7	1325.3	1326.7	1320.0	1320.0
17.5°	1497.3	1477.3	1457.3	1450.7	1432.0	1425.3	1416.0	1410.7	1398.7	1386.7	1372.0
20°	1566.7	1556.0	1548.0	1540.0	1536.0	1520.0	1496.0	1468.0	1429.3	1394.7	1365.3
22.5°	1656.0	1649.3	1650.7	1644.0	1622.7	1582.7	1528.0	1469.3	1406.7	1350.7	1306.7
25°	1769.3	1776.0	1768.0	1734.7	1673.3	1592.0	1508.0	1425.3	1342.7	1276.0	1216.0
27.5°	1913.3	1908.0	1870.7	1785.3	1680.0	1564.0	1456.0	1357.3	1258.7	1181.3	1106.7
30°	2070.7	2032.0	1934.7	1801.3	1653.3	1513.3	1380.0	1265.3	1150.7	1060.0	976.0
32.5°	2229.3	2118.7	1961.3	1782.7	1606.7	1441.3	1292.0	1157.3	1025.3	924.0	826.7
35°	2349.3	2172.0	1957.3	1742.7	1536.0	1346.7	1173.3	1006.7	853.3	732.0	633.3
37.5°	2460.0	2201.3	1930.7	1681.3	1438.7	1221.3	1005.3	825.3	670.7	549.3	464.0
40°	2528.0	2198.7	1878.7	1580.0	1304.0	1037.3	802.7	617.3	481.3	392.0	345.3
42.5°	2568.0	2170.7	1789.3	1445.3	1118.7	830.7	592.0	425.3	342.7	304.0	282.7
45°	2588.0	2110.7	1678.7	1265.3	894.7	593.3	408.0	306.7	273.3	262.7	257.3
47.5°	2576.0	2026.7	1520.0	1062.7	666.7	406.7	292.0	258.7	248.0	242.7	241.3
50°	2548.0	1917.3	1353.3	842.7	473.3	292.0	245.3	236.0	232.0	230.7	228.0
52.5°	2508.0	1788.0	1162.7	653.3	336.0	242.7	229.3	225.3	222.7	218.7	217.3
55°	2441.3	1628.0	968.0	481.3	269.3	229.3	222.7	221.3	216.0	212.0	209.3
57.5°	2361.3	1457.3	784.0	377.3	248.0	224.0	220.0	218.7	213.3	208.0	202.7
60°	2321.3	1337.3	645.3	326.7	244.0	226.7	224.0	221.3	214.7	206.7	200.0
62.5°	2222.7	1208.0	556.0	310.7	249.3	236.0	234.7	229.3	220.0	212.0	201.3
65°	1968.0	1025.3	473.3	294.7	257.3	250.7	253.3	246.7	236.0	222.7	205.3
67°	1662.7	833.3	400.0	282.7	266.7	270.7	274.7	270.7	253.3	233.3	210.7
67.5°	1580.0	776.0	380.0	278.7	269.3	274.7	281.3	277.3	258.7	236.0	213.3
70°	1188.0	556.0	301.3	264.0	278.7	293.3	306.7	305.3	286.7	258.7	222.7
72.5°	821.3	380.0	244.0	246.7	270.7	297.3	314.7	322.7	304.0	270.7	228.0
75°	494.7	242.7	205.3	222.7	246.7	273.3	301.3	304.0	282.7	249.3	213.3
77.5°	242.7	174.7	169.3	176.0	198.7	221.3	233.3	218.7	205.3	182.7	169.3
80°	146.7	137.3	134.7	149.3	162.7	158.7	149.3	137.3	130.7	125.3	120.0
82.5°	122.7	124.0	126.7	129.3	126.7	112.0	96.0	88.0	82.7	82.7	84.0
85°	125.3	128.0	117.3	108.0	96.0	80.0	65.3	56.0	57.3	58.7	58.7
87.5°	97.3	93.3	82.7	68.0	54.7	40.0	32.0	26.7	29.3	28.0	30.7
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: P141090

CATALOG NUMBER: ECM-E04-LED-E1-SL3

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	1228.0	1228.0	1228.0	1228.0	1228.0
2.5°	1197.3	1196.0	1197.3	1197.3	1198.7
5°	1176.0	1173.3	1173.3	1174.7	1174.7
7.5°	1170.7	1168.0	1168.0	1169.3	1168.0
10°	1189.3	1188.0	1190.7	1189.3	1189.3
12.5°	1245.3	1245.3	1250.7	1253.3	1250.7
15°	1321.3	1318.7	1322.7	1324.0	1325.3
17.5°	1364.0	1352.0	1348.0	1350.7	1345.3
20°	1340.0	1320.0	1312.0	1310.7	1301.3
22.5°	1272.0	1242.7	1230.7	1225.3	1214.7
25°	1176.0	1141.3	1125.3	1112.0	1105.3
27.5°	1061.3	1018.7	996.0	985.3	981.3
30°	917.3	876.0	842.7	825.3	820.0
32.5°	757.3	697.3	662.7	641.3	626.7
35°	565.3	508.0	482.7	466.7	448.0
37.5°	410.7	376.0	354.7	344.0	340.0
40°	317.3	300.0	289.3	288.0	286.7
42.5°	274.7	266.7	265.3	262.7	260.0
45°	253.3	250.7	252.0	248.0	245.3
47.5°	238.7	237.3	237.3	234.7	233.3
50°	226.7	226.7	225.3	224.0	224.0
52.5°	216.0	217.3	217.3	214.7	214.7
55°	206.7	206.7	208.0	206.7	206.7
57.5°	200.0	198.7	200.0	200.0	200.0
60°	196.0	193.3	192.0	193.3	193.3
62.5°	192.0	188.0	186.7	186.7	188.0
65°	192.0	185.3	182.7	182.7	181.3
67°	193.3	182.7	177.3	174.7	173.3
67.5°	193.3	181.3	174.7	173.3	172.0
70°	193.3	176.0	166.7	160.0	160.0
72.5°	192.0	170.7	156.0	149.3	146.7
75°	182.7	161.3	148.0	140.0	137.3
77.5°	153.3	140.0	133.3	126.7	125.3
80°	116.0	109.3	104.0	89.3	82.7
82.5°	82.7	78.7	69.3	64.0	60.0
85°	58.7	54.7	50.7	45.3	45.3
87.5°	32.0	30.7	29.3	26.7	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)