

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: P140774

Luminaire Tested: **ECM-F04-LED-E1-RW-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P140774
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33689)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F04-LED-E1-RW-7030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (28) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8919.2 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

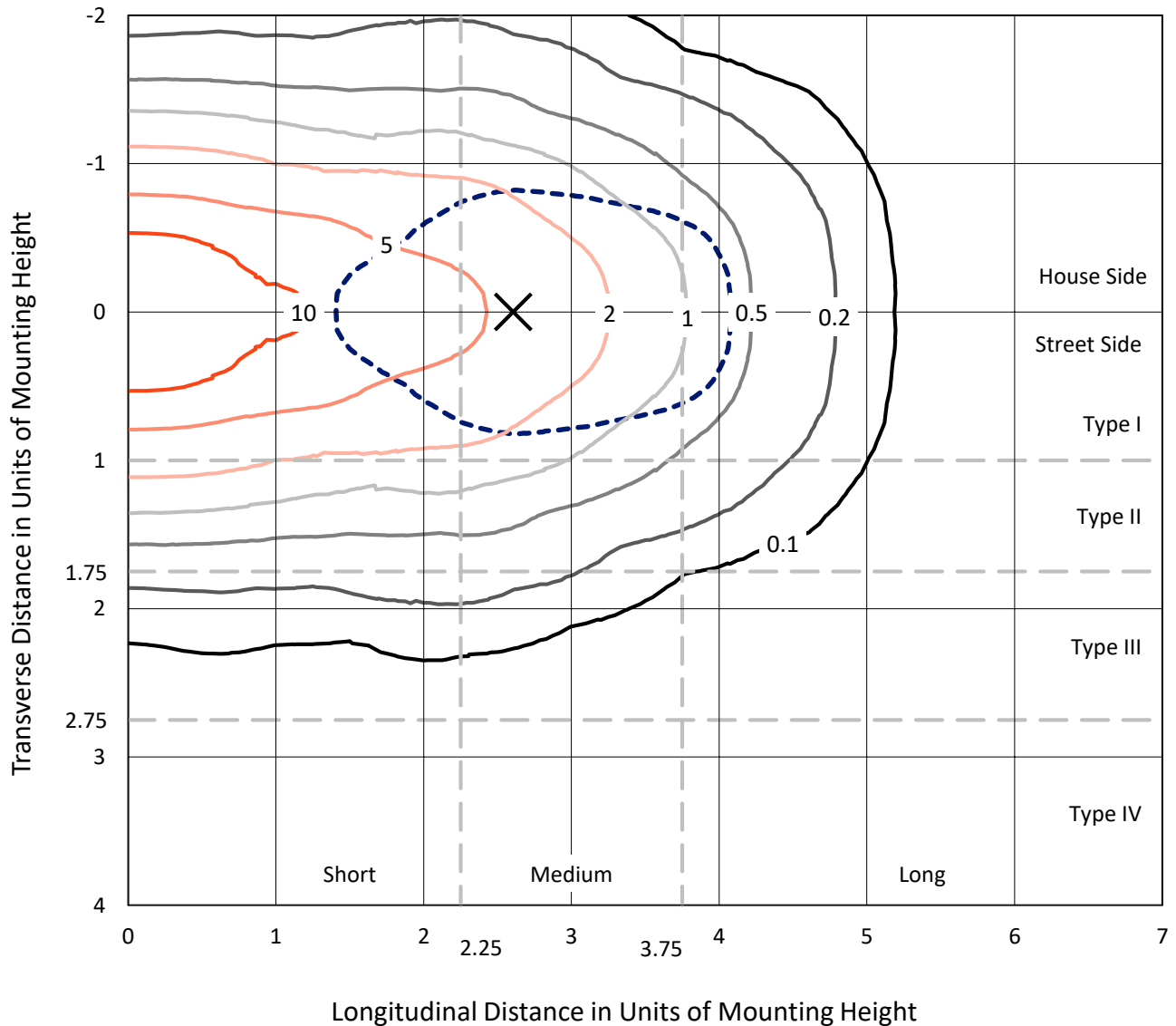
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P140774
 CATALOG NUMBER: ECM-F04-LED-E1-RW-7030

Iso-Footcandle Lines of Horizontal Illumination

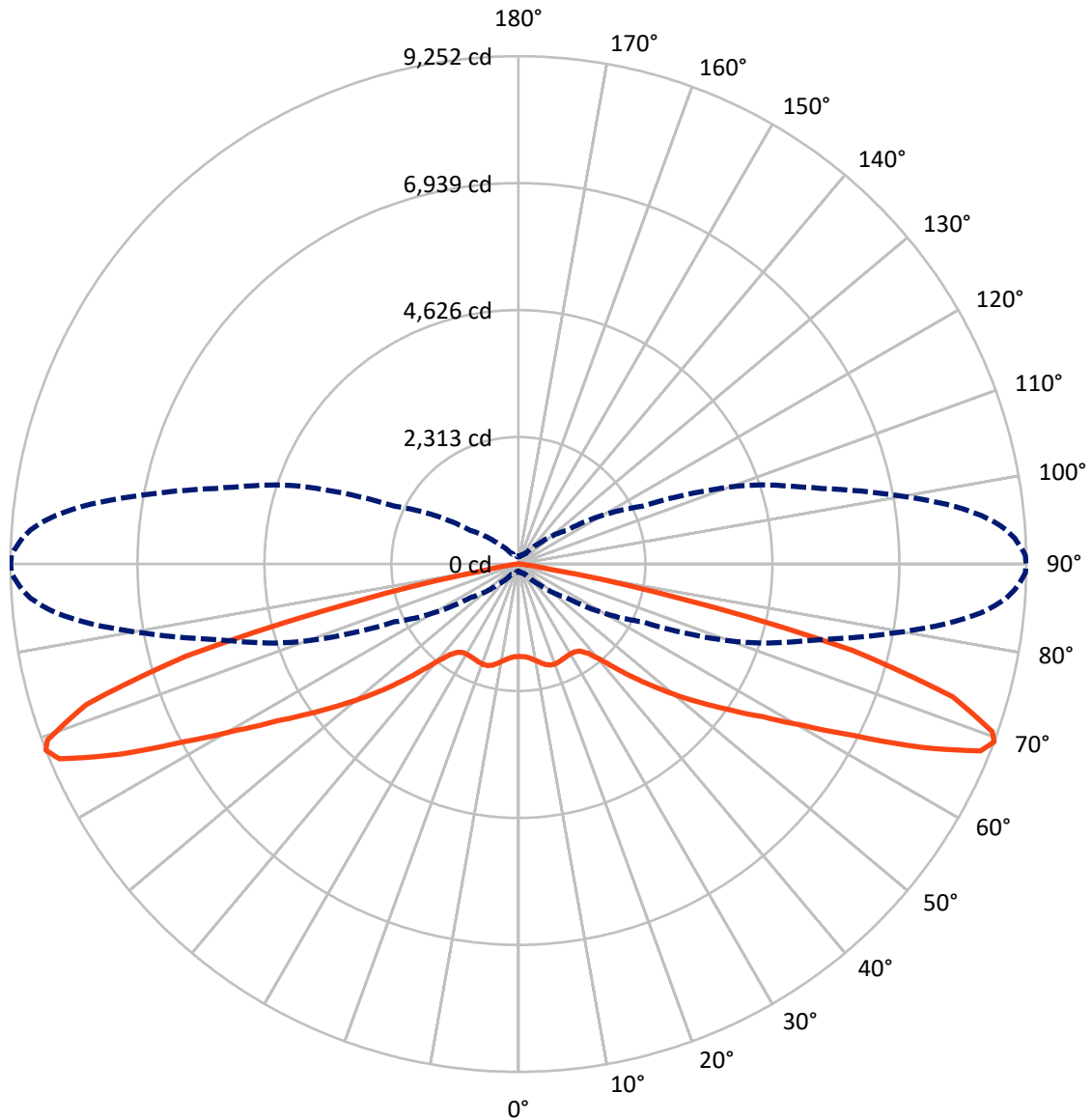
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.2 fc
 Type I - Short - Full Cutoff

REPORT NUMBER: P140774
CATALOG NUMBER: ECM-F04-LED-E1-RW-7030

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P140774

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4459.6	0.0	4459.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4459.6	0.0	4459.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	8919.2	0.0	8919.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.9	1.8
10°-20°	518.3	5.8
20°-30°	838.2	9.4
30°-40°	1047.0	11.7
40°-50°	1309.5	14.7
50°-60°	1613.7	18.1
60°-70°	1997.8	22.4
70°-80°	1305.7	14.6
80°-90°	124.1	1.4
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°	8919.2	100.0
0°-180°	8919.2	100.0



REPORT NUMBER: P140774

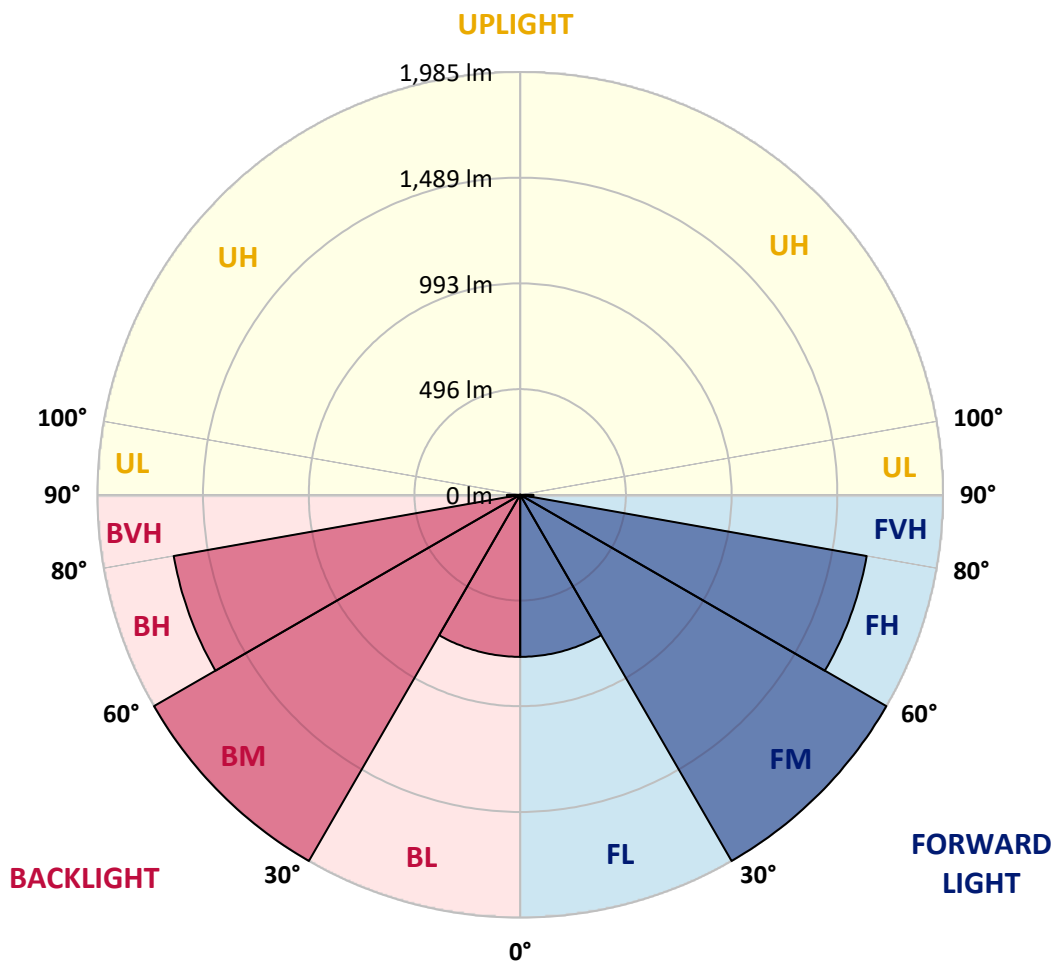
CATALOG NUMBER: ECM-F04-LED-E1-RW-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	760.7	8.5			
FM	(30°-60°)	1985.1	22.3			
FH	(60°-80°)	1651.8	18.5			G1/1800
FVH	(80°-90°)	62.0	0.7			G1/100
BL	(0°-30°)	760.7	8.5	B2/1000		
BM	(30°-60°)	1985.1	22.3	B2/2500		
BH	(60°-80°)	1651.8	18.5	B3/2500		G3/2500
BVH	(80°-90°)	62.0	0.7			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 I Short





REPORT NUMBER: P140774

CATALOG NUMBER: ECM-F04-LED-E1-RW-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9
2.5°	1695.0	1696.0	1693.0	1694.0	1695.0	1694.0	1692.4	1692.4	1692.0	1691.4	1691.0
5°	1706.0	1706.5	1705.0	1707.5	1708.0	1709.6	1709.6	1710.1	1709.8	1709.5	1709.2
7.5°	1721.6	1723.6	1722.2	1725.6	1729.2	1734.2	1736.7	1742.8	1742.6	1742.5	1742.4
10°	1736.2	1738.2	1738.2	1746.2	1754.8	1764.3	1774.4	1784.0	1784.5	1785.2	1785.8
12.5°	1747.2	1748.8	1751.2	1765.8	1785.0	1801.0	1818.6	1833.7	1834.3	1834.9	1835.5
15°	1742.7	1746.2	1757.8	1781.0	1814.6	1841.2	1862.9	1881.0	1882.2	1883.4	1884.6
17.5°	1727.2	1732.7	1749.3	1788.4	1840.2	1883.0	1908.6	1913.6	1914.4	1915.2	1916.0
20°	1693.4	1701.6	1727.6	1783.4	1859.8	1917.6	1943.2	1934.2	1933.4	1932.6	1931.8
22.5°	1637.2	1647.7	1680.4	1759.8	1861.4	1942.8	1968.0	1942.8	1940.0	1937.2	1934.3
25°	1561.8	1570.3	1607.5	1701.6	1838.2	1947.3	1983.5	1948.4	1943.8	1939.3	1934.8
27.5°	1470.3	1477.4	1523.6	1623.6	1781.0	1924.2	1993.6	1957.8	1952.0	1946.2	1940.4
30°	1367.2	1373.3	1424.1	1530.6	1700.5	1873.4	1992.6	1979.5	1972.6	1965.6	1958.7
32.5°	1264.7	1267.2	1312.4	1429.6	1611.0	1798.6	1976.0	2012.6	2005.9	1999.2	1992.5
35°	1152.1	1160.2	1208.4	1336.1	1510.0	1716.0	1953.8	2058.9	2055.1	2051.3	2047.4
37.5°	1061.6	1064.1	1115.9	1248.6	1428.1	1641.2	1925.7	2118.2	2121.0	2123.7	2126.4
40°	971.2	971.2	1022.4	1160.2	1346.1	1573.8	1902.0	2191.1	2204.9	2218.7	2232.4
42.5°	872.2	879.2	929.4	1066.6	1266.7	1516.5	1890.0	2278.6	2304.5	2330.5	2356.4
45°	779.6	784.2	835.4	969.6	1167.7	1451.2	1886.5	2376.1	2415.5	2454.9	2494.3
47.5°	688.6	695.2	743.9	867.1	1059.6	1364.2	1882.0	2487.2	2537.5	2587.9	2638.3
50°	604.2	608.2	662.5	774.6	953.0	1251.6	1852.3	2611.3	2672.8	2734.4	2795.9
52.5°	514.8	522.8	567.5	683.1	845.5	1130.5	1774.4	2746.5	2820.9	2895.3	2969.7
55°	421.2	419.2	473.0	581.6	751.4	1014.4	1630.6	2863.6	2953.4	3043.2	3133.0
57.5°	308.6	315.2	364.4	474.5	642.4	916.8	1461.2	2924.5	3036.5	3148.5	3260.5
60°	221.2	230.2	273.0	359.9	533.8	821.4	1288.3	2882.3	3030.7	3179.1	3327.4
62.5°	173.0	177.0	213.6	270.0	416.2	721.4	1172.2	2772.7	2977.3	3181.9	3386.5
65°	150.8	155.3	188.0	217.2	316.2	626.3	1102.3	2685.2	2955.2	3225.3	3495.3
67.5°	137.2	142.8	170.9	191.0	259.4	545.4	1085.8	2613.8	2930.6	3247.4	3564.2
69°	130.7	136.2	162.4	181.0	240.8	519.8	1066.6	2493.7	2815.2	3136.7	3458.2
70°	127.7	132.2	157.3	174.9	234.8	504.6	1023.4	2356.4	2667.2	2978.0	3288.7
72.5°	117.6	120.1	143.3	160.4	222.2	422.2	810.8	1763.8	2023.5	2283.2	2542.9
75°	104.0	108.1	129.2	146.8	178.4	270.5	531.8	1066.2	1258.5	1450.8	1643.1
77.5°	89.5	93.0	111.1	140.2	137.2	163.9	305.6	595.6	699.6	803.6	907.5
80°	77.4	80.9	97.5	130.1	111.6	121.2	206.1	388.6	428.1	467.6	507.1
82.5°	60.8	63.3	81.9	106.0	86.4	89.9	154.3	339.3	363.1	387.0	410.8
85°	38.7	40.2	59.8	72.4	60.3	53.3	97.0	248.8	267.6	286.4	305.2
87.5°	13.6	19.1	26.6	25.1	25.1	19.1	34.2	92.0	99.3	106.7	114.0
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: P140774

CATALOG NUMBER: ECM-F04-LED-E1-RW-7030

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9
2.5°	1690.5	1690.0	1690.4	1690.4	1690.0	1689.4	1689.4	1689.0	1688.0	1688.0	1687.4
5°	1708.9	1708.6	1709.6	1709.0	1709.6	1709.0	1709.0	1708.6	1709.0	1707.0	1706.6
7.5°	1742.3	1742.2	1742.2	1743.7	1742.7	1742.2	1743.2	1743.2	1743.2	1742.2	1742.2
10°	1786.4	1787.0	1788.0	1789.0	1789.0	1789.0	1791.0	1789.5	1792.5	1789.5	1791.0
12.5°	1836.1	1836.8	1839.2	1840.2	1841.2	1841.3	1841.2	1844.3	1846.3	1845.8	1846.2
15°	1885.8	1887.0	1887.5	1889.0	1889.0	1889.5	1891.5	1895.0	1894.0	1896.0	1896.0
17.5°	1916.8	1917.6	1917.2	1917.2	1918.2	1919.6	1921.6	1923.6	1923.2	1924.7	1925.7
20°	1931.0	1930.2	1928.7	1927.7	1927.2	1928.2	1928.2	1928.7	1929.7	1929.7	1929.7
22.5°	1931.5	1928.7	1925.2	1923.2	1920.7	1919.2	1920.2	1919.2	1919.2	1919.2	1918.2
25°	1930.2	1925.7	1920.2	1916.2	1912.1	1909.6	1907.1	1906.1	1904.0	1904.1	1904.1
27.5°	1934.5	1928.7	1923.2	1915.6	1910.2	1907.1	1903.6	1900.1	1898.0	1896.0	1896.0
30°	1951.7	1944.8	1937.8	1928.7	1921.2	1918.6	1912.1	1908.6	1903.6	1901.0	1900.0
32.5°	1985.7	1979.0	1969.4	1959.4	1953.4	1945.8	1940.3	1932.8	1927.2	1923.7	1919.2
35°	2043.6	2039.8	2031.8	2025.2	2016.2	2007.6	1996.6	1992.6	1981.0	1979.0	1973.4
37.5°	2129.1	2131.8	2130.2	2125.2	2119.2	2111.7	2107.2	2098.6	2094.1	2089.6	2084.6
40°	2246.2	2260.0	2264.5	2270.0	2271.5	2278.1	2270.5	2269.6	2263.5	2268.6	2265.5
42.5°	2382.3	2408.2	2422.3	2438.9	2457.0	2473.6	2486.7	2508.8	2506.3	2523.4	2535.4
45°	2533.7	2573.1	2609.4	2637.0	2671.6	2709.9	2743.6	2774.7	2809.9	2830.0	2859.6
47.5°	2688.6	2739.0	2790.8	2842.0	2891.4	2940.6	3000.9	3055.7	3109.0	3145.2	3190.9
50°	2857.5	2919.0	2981.3	3044.1	3114.0	3191.4	3258.8	3330.2	3403.5	3477.9	3530.2
52.5°	3044.1	3118.5	3186.4	3252.8	3339.2	3421.1	3508.6	3598.0	3709.2	3790.1	3862.0
55°	3222.8	3312.6	3387.0	3466.4	3556.8	3647.8	3754.9	3867.0	3984.6	4101.2	4206.8
57.5°	3372.5	3484.4	3572.9	3651.8	3748.8	3853.9	3969.0	4107.8	4242.0	4386.7	4523.0
60°	3475.8	3624.2	3730.8	3825.8	3938.3	4055.0	4205.2	4369.2	4545.6	4725.6	4900.5
62.5°	3591.1	3795.6	3941.4	4077.1	4210.3	4340.0	4509.4	4713.0	4952.2	5169.9	5401.6
65°	3765.3	4035.4	4250.5	4423.4	4612.5	4801.5	4999.0	5236.7	5508.6	5826.4	6096.3
67.5°	3880.9	4197.7	4471.2	4719.0	4939.7	5169.4	5418.7	5703.2	6031.4	6355.6	6691.4
69°	3779.7	4101.2	4390.2	4663.2	4905.0	5152.3	5405.6	5692.2	6027.5	6385.8	6740.2
70°	3599.4	3910.2	4208.8	4496.4	4732.6	4991.0	5240.2	5513.2	5853.0	6211.4	6597.0
72.5°	2802.6	3062.2	3368.8	3646.3	3928.3	4164.0	4389.2	4663.2	5006.0	5347.3	5722.8
75°	1835.4	2027.8	2308.2	2536.4	2780.2	3001.4	3164.8	3436.7	3644.8	3966.0	4314.8
77.5°	1011.4	1115.4	1261.2	1447.2	1552.2	1676.9	1840.2	1939.3	2087.0	2311.8	2416.3
80°	546.6	586.1	647.4	686.1	717.3	686.6	670.0	699.8	687.2	683.7	650.0
82.5°	434.6	458.4	490.1	512.7	498.2	432.3	362.4	311.6	279.0	234.8	201.0
85°	324.0	342.8	354.8	370.0	367.5	332.2	265.9	205.6	161.4	128.7	112.1
87.5°	121.4	128.7	132.2	160.9	147.8	140.2	109.0	79.4	60.9	44.2	35.7
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: P140774

CATALOG NUMBER: ECM-F04-LED-E1-RW-7030

CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9
2.5°	1688.4	1688.0	1688.0	1688.0	1688.4	1687.4	1686.4	1687.4	1686.9	1686.9	1686.9
5°	1708.6	1708.0	1708.0	1708.6	1708.0	1708.6	1708.0	1706.0	1707.0	1707.5	1708.0
7.5°	1743.2	1742.8	1742.8	1745.2	1744.8	1744.2	1743.8	1744.8	1743.2	1743.2	1744.2
10°	1791.0	1793.0	1792.5	1794.0	1793.5	1792.5	1791.5	1792.5	1794.0	1794.5	1792.5
12.5°	1849.3	1849.8	1848.8	1851.3	1849.8	1853.3	1849.3	1851.3	1853.3	1850.3	1851.8
15°	1896.6	1896.6	1898.6	1899.0	1898.6	1899.6	1902.6	1901.0	1899.6	1902.1	1903.1
17.5°	1925.2	1926.7	1927.2	1927.7	1928.7	1929.7	1930.2	1929.7	1930.2	1931.2	1933.2
20°	1931.7	1931.2	1932.2	1932.8	1934.2	1934.2	1935.2	1934.8	1936.2	1936.8	1937.3
22.5°	1920.2	1920.6	1921.2	1922.6	1922.2	1923.2	1923.6	1925.2	1924.7	1925.7	1926.2
25°	1904.6	1905.6	1906.1	1905.6	1905.6	1906.1	1906.6	1906.1	1908.2	1909.1	1909.1
27.5°	1894.5	1894.6	1896.0	1895.5	1894.5	1895.6	1895.0	1895.0	1895.0	1895.6	1897.0
30°	1898.6	1897.0	1896.0	1896.0	1895.6	1894.5	1893.5	1892.0	1892.0	1892.6	1892.0
32.5°	1920.2	1917.2	1915.6	1914.2	1913.1	1910.6	1907.6	1906.6	1904.0	1904.1	1903.1
35°	1975.5	1972.0	1972.0	1966.4	1963.4	1961.9	1959.4	1951.8	1952.3	1949.3	1948.3
37.5°	2085.6	2079.5	2077.0	2082.0	2072.4	2076.5	2068.0	2064.4	2066.4	2061.0	2063.9
40°	2270.6	2280.1	2276.0	2281.6	2284.1	2285.1	2285.1	2276.6	2285.1	2271.5	2276.1
42.5°	2537.4	2562.6	2571.6	2574.6	2590.2	2586.2	2581.6	2581.2	2580.7	2587.2	2583.7
45°	2873.2	2876.8	2919.5	2927.5	2936.0	2945.6	2943.1	2954.1	2962.2	2951.1	2952.6
47.5°	3216.5	3252.2	3283.4	3300.5	3319.0	3309.6	3317.1	3321.6	3350.2	3347.2	3344.7
50°	3594.6	3654.4	3671.0	3689.6	3704.2	3733.2	3730.8	3748.4	3745.4	3769.0	3772.0
52.5°	3952.9	4018.8	4085.6	4114.8	4136.9	4170.6	4183.6	4202.8	4195.8	4193.7	4211.3
55°	4309.3	4419.4	4495.8	4570.7	4612.4	4657.2	4676.3	4703.4	4715.4	4721.0	4698.9
57.5°	4662.7	4794.9	4924.1	5016.5	5081.0	5148.3	5184.0	5213.6	5248.3	5259.8	5248.8
60°	5075.9	5269.4	5438.8	5562.5	5681.1	5754.5	5831.4	5887.6	5898.2	5946.0	5976.7
62.5°	5626.2	5862.0	6076.7	6256.6	6440.6	6577.8	6716.6	6771.9	6826.6	6863.8	6886.5
65°	6376.8	6687.4	6984.0	7239.8	7465.5	7693.8	7855.6	7940.6	8049.6	8071.2	8047.6
67.5°	7034.8	7401.2	7769.6	8095.4	8339.2	8575.9	8767.9	8908.7	9010.8	9061.0	9082.1
69°	7107.2	7479.6	7856.1	8180.8	8475.9	8712.2	8908.6	9048.4	9150.0	9236.9	9252.0
70°	6958.8	7377.0	7743.0	8070.8	8374.8	8615.6	8791.6	8951.4	9067.0	9133.8	9157.5
72.5°	6108.8	6484.8	6854.3	7231.8	7492.7	7781.7	7926.5	8054.6	8208.5	8296.0	8276.8
75°	4629.5	4954.7	5277.0	5559.4	5760.5	5867.1	6036.5	6160.6	6138.0	6285.3	6289.3
77.5°	2611.4	2653.6	2872.2	2843.0	2939.6	2942.1	2967.2	3011.0	2927.0	3099.4	2975.8
80°	633.4	624.8	670.0	616.8	612.2	607.8	592.7	622.3	626.3	595.7	601.2
82.5°	186.0	178.0	174.4	169.9	177.4	175.0	176.4	177.4	182.4	175.9	183.0
85°	102.0	96.0	95.5	93.0	92.5	86.9	86.4	86.4	83.0	84.0	83.4
87.5°	39.2	36.7	34.7	33.2	32.7	31.2	29.7	27.1	24.1	21.6	20.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)