

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P156648

Luminaire Tested: **TLM-E05-LED-E1-T4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156648
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33673)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-E05-LED-E1-T4-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (105) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12752.9 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

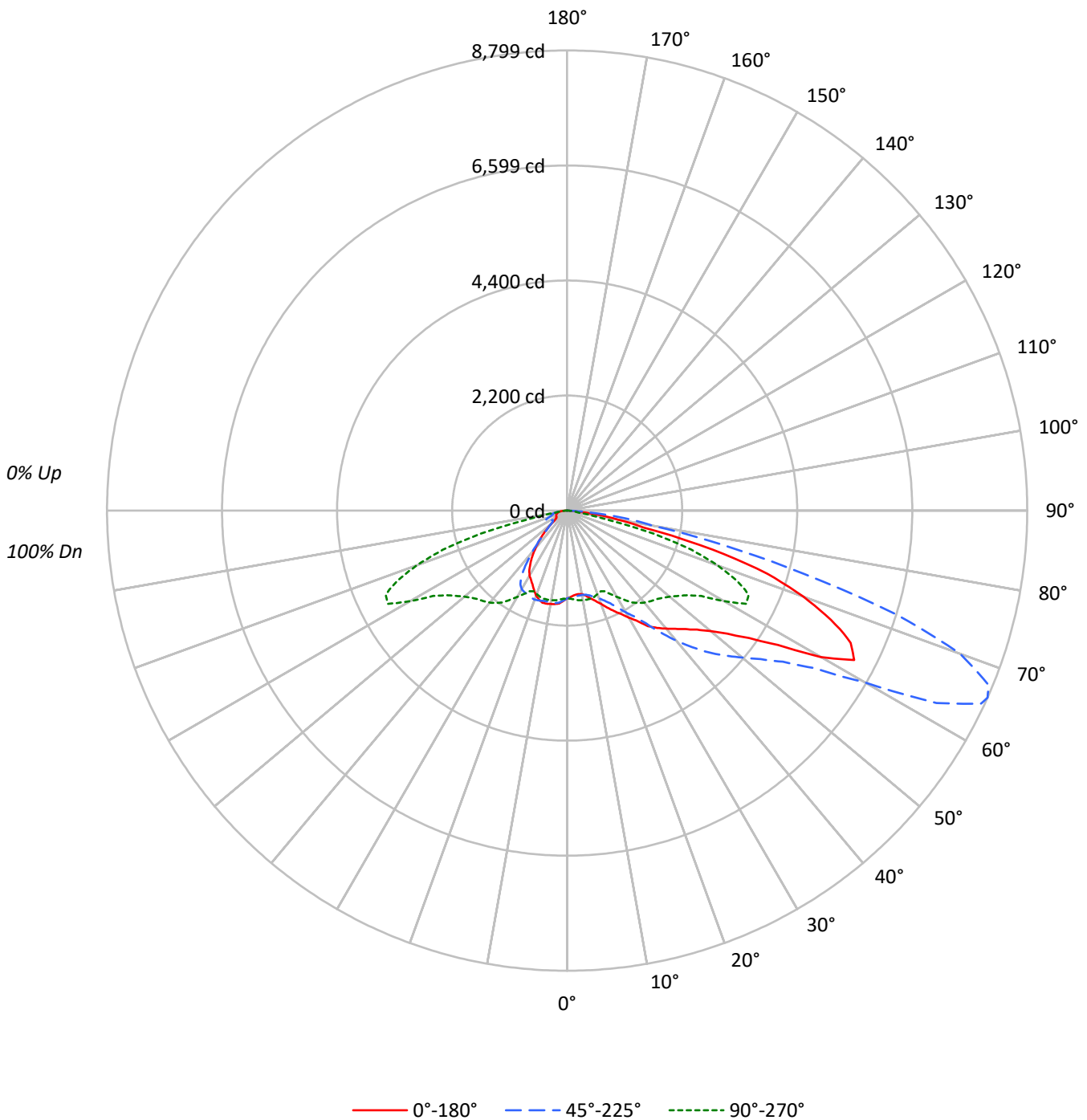
Input Watts (W): 127.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	105	99	93	88	102	96	91	87	92	88	84	88	84	81	84	81	79	76					76			
2	92	81	72	65	89	79	71	64	76	69	62	72	66	61	69	64	59	57					57			
3	82	68	58	49	79	66	57	49	63	55	48	60	53	47	57	51	46	43					43			
4	73	58	47	39	70	57	46	38	54	45	38	51	43	37	49	42	36	34					34			
5	66	50	39	31	64	49	39	31	47	38	31	45	36	30	42	35	30	27					27			
6	60	44	34	26	58	43	33	26	41	32	25	39	31	25	38	30	25	22					22			
7	55	39	29	22	53	38	29	22	37	28	22	35	27	21	34	27	21	19					19			
8	51	35	26	19	49	35	25	19	33	25	19	32	24	18	31	23	18	16					16			
9	47	32	23	16	46	31	23	16	30	22	16	29	22	16	28	21	16	14					14			
10	44	29	21	15	43	29	20	15	28	20	14	27	19	14	26	19	14	12					12			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	21799	21799	21799
5°	21096	22267	23219
10°	21340	22932	23877
15°	23380	23399	24494
20°	26208	23450	23878
25°	30333	24376	22362
30°	35388	28542	21507
35°	42692	33894	19353
40°	49889	38912	15980
45°	58795	44039	12150
50°	72283	51651	7776
55°	96145	63735	5820
60°	145173	89826	6129
65°	183581	117409	7079
70°	182092	116009	8429
75°	144418	85918	10362
80°	73219	18066	12920
85°	10669	14865	16531



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.2	1.3
10°-20°	495.6	3.9
20°-30°	853.6	6.7
30°-40°	1291.5	10.1
40°-50°	1673.9	13.1
50°-60°	2307.8	18.1
60°-70°	3585.6	28.1
70°-80°	2085.1	16.3
80°-90°	296.5	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°-30°	1512.4	11.9
0°-40°	2803.9	22.0
0°-60°	6785.7	53.2
0°-90°	12752.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12752.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1681	1681	1681	1681	1681	
5°	1620	1644	1710	1767	1784	155
15°	1741	1681	1743	1788	1824	499
25°	2120	1960	1704	1781	1563	988
35°	2697	2635	2141	1511	1222	1685
45°	3206	3837	2401	633	662	2506
55°	4252	5037	2819	326	257	3939
65°	5982	8734	3826	461	231	5662
75°	2882	4695	1715	290	207	2968
85°	72	490	100	118	111	310
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9
2.5°	1650.0	1655.6	1651.4	1652.8	1652.8	1654.2	1654.2	1655.6	1654.2	1658.4	1661.3
5°	1620.5	1623.3	1621.9	1624.7	1627.5	1633.1	1631.7	1638.7	1640.2	1644.4	1651.4
7.5°	1609.2	1606.4	1607.8	1612.0	1614.8	1617.6	1620.5	1626.1	1630.3	1640.2	1645.8
10°	1620.5	1619.1	1620.5	1623.3	1623.3	1624.7	1621.9	1627.5	1630.3	1638.7	1644.4
12.5°	1666.9	1666.9	1664.1	1664.1	1661.3	1658.4	1651.4	1647.2	1645.8	1647.2	1650.0
15°	1741.4	1738.6	1733.0	1728.8	1723.1	1713.3	1703.5	1695.0	1689.4	1680.9	1678.1
17.5°	1814.6	1810.4	1804.7	1799.1	1792.1	1782.2	1766.8	1756.9	1741.4	1731.6	1726.0
20°	1899.0	1890.5	1883.5	1876.5	1862.4	1859.6	1844.1	1827.2	1809.0	1786.4	1783.6
22.5°	2008.7	1994.6	1986.2	1982.0	1967.9	1963.7	1938.4	1914.5	1891.9	1862.4	1855.4
25°	2119.8	2105.8	2101.5	2095.9	2086.1	2080.4	2056.5	2029.8	2000.3	1959.5	1951.0
27.5°	2228.1	2229.5	2218.3	2222.5	2219.7	2209.8	2185.9	2159.2	2136.7	2088.9	2079.0
30°	2363.2	2354.7	2349.1	2357.5	2347.7	2349.1	2328.0	2313.9	2277.4	2249.2	2229.5
32.5°	2503.8	2502.4	2510.9	2516.5	2515.1	2512.3	2495.4	2481.3	2449.0	2408.2	2399.7
35°	2696.6	2705.0	2712.0	2737.3	2737.3	2755.6	2738.8	2721.9	2683.9	2634.7	2617.8
37.5°	2827.4	2830.2	2858.3	2892.1	2934.3	2973.7	2984.9	2989.1	2973.7	2937.1	2911.8
40°	2946.9	2952.6	2997.6	3049.6	3111.5	3188.9	3235.3	3256.4	3260.6	3243.7	3188.9
42.5°	3066.5	3074.9	3121.4	3197.3	3283.1	3381.6	3463.2	3515.2	3544.8	3544.8	3512.4
45°	3205.8	3217.0	3267.7	3350.6	3450.5	3574.3	3686.8	3786.7	3834.5	3837.3	3806.4
47.5°	3370.3	3380.2	3439.3	3523.7	3626.3	3751.5	3893.6	4007.6	4096.2	4101.8	4076.5
50°	3582.7	3596.8	3646.0	3722.0	3827.5	3954.1	4096.2	4255.1	4348.0	4370.5	4343.7
52.5°	3864.1	3866.9	3907.7	3978.0	4080.7	4201.7	4352.2	4525.2	4647.6	4665.9	4622.3
55°	4252.3	4248.1	4274.8	4350.8	4428.1	4522.4	4678.5	4872.6	5009.1	5037.2	4992.2
57.5°	4779.8	4775.6	4798.1	4816.4	4961.3	5052.7	5206.0	5391.7	5523.9	5605.5	5528.1
60°	5597.1	5592.8	5629.4	5736.3	5844.6	5978.3	6127.4	6349.6	6535.3	6559.2	6483.3
62.5°	6189.3	6210.4	6290.5	6415.7	6635.2	6896.8	7169.7	7462.3	7843.5	7964.5	7927.9
65°	5982.5	6024.7	6135.8	6325.7	6618.3	6979.8	7407.4	7937.7	8448.3	8733.9	8725.5
66°	5796.8	5843.2	5979.7	6162.5	6472.0	6867.3	7334.3	7912.4	8483.5	8798.6	8818.3
67.5°	5459.2	5511.3	5644.9	5861.5	6162.5	6583.1	7085.3	7714.1	8359.7	8726.9	8778.9
70°	4802.3	4861.4	4958.4	5137.1	5433.9	5809.5	6338.4	6901.0	7577.6	7998.2	8061.5
72.5°	4014.6	4066.6	4174.9	4321.2	4564.6	4800.9	5215.9	5630.8	6114.7	6594.4	6548.0
75°	2882.2	2904.7	2969.4	3128.4	3259.2	3471.6	3805.0	4145.4	4476.0	4695.4	4726.3
77.5°	1498.1	1557.2	1648.6	1824.4	1966.5	2157.8	2374.4	2630.4	2872.4	3073.5	3018.7
80°	980.4	1005.8	1087.3	1177.4	1281.5	1403.8	1548.7	1644.4	1675.3	1662.7	1675.3
82.5°	565.5	611.9	720.2	789.1	866.5	908.7	1024.0	1133.8	1195.7	1118.3	1090.2
85°	71.7	92.8	292.6	368.5	422.0	485.3	520.5	586.6	547.2	489.5	596.4
87.5°	15.5	14.1	19.7	42.2	43.6	36.6	68.9	73.1	45.0	22.5	28.1
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9
2.5°	1664.1	1665.5	1668.3	1672.5	1675.3	1678.1	1680.9	1685.2	1688.0	1690.8	1696.4
5°	1657.0	1662.7	1668.3	1673.9	1680.9	1692.2	1699.2	1704.9	1710.5	1721.7	1726.0
7.5°	1652.8	1662.7	1671.1	1680.9	1692.2	1702.0	1714.7	1721.7	1730.2	1737.2	1745.7
10°	1650.0	1664.1	1672.5	1686.6	1699.2	1709.1	1723.1	1731.6	1741.4	1749.9	1754.1
12.5°	1655.6	1662.7	1671.1	1685.2	1700.6	1714.7	1730.2	1737.2	1745.7	1752.7	1754.1
15°	1679.5	1679.5	1680.9	1692.2	1707.7	1718.9	1731.6	1738.6	1742.8	1747.1	1747.1
17.5°	1723.1	1713.3	1706.3	1707.7	1717.5	1724.6	1731.6	1731.6	1728.8	1727.4	1724.6
20°	1773.8	1761.1	1747.1	1737.2	1734.4	1728.8	1724.6	1710.5	1699.2	1689.4	1682.4
22.5°	1846.9	1827.2	1807.5	1789.3	1772.4	1751.3	1727.4	1699.2	1672.5	1654.2	1643.0
25°	1937.0	1921.5	1897.6	1869.4	1848.3	1809.0	1778.0	1737.2	1703.5	1679.5	1659.8
27.5°	2065.0	2046.7	2024.2	1998.9	1967.9	1924.3	1886.3	1838.5	1797.7	1762.5	1737.2
30°	2223.9	2200.0	2183.1	2152.2	2131.1	2081.8	2043.9	1984.8	1906.0	1849.7	1814.6
32.5°	2387.1	2360.4	2346.3	2322.4	2298.5	2268.9	2211.3	2119.8	2018.5	1927.1	1866.6
35°	2605.1	2577.0	2551.7	2530.6	2495.4	2440.5	2389.9	2280.2	2140.9	2012.9	1911.6
37.5°	2879.4	2833.0	2769.7	2716.2	2654.4	2575.6	2498.2	2385.7	2226.7	2060.7	1925.7
40°	3172.0	3090.4	3000.4	2900.5	2793.6	2679.7	2591.1	2477.1	2298.5	2101.5	1915.9
42.5°	3477.2	3347.8	3222.6	3082.0	2932.9	2797.8	2682.5	2557.3	2351.9	2112.8	1876.5
45°	3779.7	3634.8	3444.9	3260.6	3072.1	2904.7	2775.3	2634.7	2401.2	2117.0	1824.4
47.5°	4030.1	3881.0	3664.3	3433.6	3210.0	3020.1	2868.2	2716.2	2467.3	2146.6	1811.8
50°	4294.5	4113.0	3872.5	3599.6	3346.4	3134.0	2972.3	2814.7	2560.1	2222.5	1852.6
52.5°	4582.9	4374.7	4093.4	3788.1	3511.0	3273.3	3097.4	2935.7	2678.3	2329.4	1929.9
55°	4934.5	4679.9	4374.7	4030.1	3733.3	3470.2	3276.1	3084.8	2818.9	2456.0	2027.0
57.5°	5471.9	5159.6	4816.4	4423.9	4094.8	3783.9	3551.8	3331.0	3037.0	2644.5	2159.2
60°	6443.9	6110.5	5664.6	5189.1	4802.3	4439.4	4099.0	3824.7	3463.2	3015.9	2451.8
62.5°	7836.5	7393.4	6798.3	6133.0	5626.6	5103.3	4719.3	4311.4	3862.7	3380.2	2796.4
65°	8610.1	8072.8	7276.6	6504.4	5853.1	5284.8	4796.7	4324.0	3826.1	3364.7	2876.6
66°	8705.8	8145.9	7318.8	6505.8	5822.1	5238.4	4724.9	4235.4	3726.2	3285.9	2842.8
67.5°	8666.4	8093.9	7241.4	6383.4	5688.5	5061.1	4530.8	4023.0	3515.2	3104.5	2730.3
70°	8020.7	7477.8	6640.8	5809.5	5149.8	4530.8	4024.4	3525.1	3059.5	2707.8	2432.1
72.5°	6660.5	6196.3	5469.1	4816.4	4298.7	3788.1	3359.1	2882.2	2488.4	2228.1	2065.0
75°	4807.9	4526.6	3864.1	3489.9	3035.6	2696.6	2280.2	1997.4	1714.7	1588.1	1560.0
77.5°	3037.0	2658.6	2238.0	1842.7	1515.0	1256.1	977.6	829.9	692.1	678.0	818.7
80°	1537.5	1384.1	1066.2	849.6	714.6	578.1	457.2	346.0	241.9	291.2	348.8
82.5°	1007.2	839.8	658.3	541.6	471.2	391.0	303.8	211.0	154.7	174.4	239.1
85°	544.4	464.2	374.2	295.4	239.1	213.8	143.5	101.3	99.9	106.9	136.4
87.5°	39.4	39.4	30.9	28.1	33.8	28.1	25.3	25.3	23.9	25.3	33.8
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9	1680.9
2.5°	1699.2	1703.5	1704.9	1711.9	1716.1	1718.9	1721.7	1721.7	1723.1	1727.4	1728.8
5°	1731.6	1738.6	1747.1	1752.7	1755.5	1763.9	1766.8	1766.8	1769.6	1775.2	1779.4
7.5°	1751.3	1761.1	1769.6	1772.4	1778.0	1780.8	1785.0	1787.9	1787.9	1793.5	1796.3
10°	1758.3	1763.9	1772.4	1772.4	1778.0	1778.0	1782.2	1783.6	1783.6	1789.3	1793.5
12.5°	1758.3	1761.1	1768.2	1768.2	1772.4	1773.8	1779.4	1783.6	1785.0	1792.1	1797.7
15°	1749.9	1752.7	1758.3	1759.7	1769.6	1775.2	1787.9	1796.3	1796.3	1803.3	1806.1
17.5°	1726.0	1733.0	1744.2	1755.5	1773.8	1786.4	1801.9	1809.0	1803.3	1799.1	1794.9
20°	1686.6	1699.2	1726.0	1754.1	1786.4	1803.3	1811.8	1804.7	1785.0	1765.3	1752.7
22.5°	1647.2	1672.5	1717.5	1759.7	1796.3	1807.5	1803.3	1778.0	1745.7	1721.7	1704.9
25°	1665.5	1695.0	1738.6	1776.6	1800.5	1797.7	1780.8	1745.7	1710.5	1679.5	1651.4
27.5°	1741.4	1773.8	1797.7	1810.4	1807.5	1787.9	1761.1	1721.7	1679.5	1638.7	1599.4
30°	1813.2	1830.1	1835.7	1825.8	1803.3	1771.0	1737.2	1692.2	1635.9	1585.3	1540.3
32.5°	1845.5	1828.6	1801.9	1775.2	1738.6	1710.5	1664.1	1614.8	1544.5	1484.0	1439.0
35°	1845.5	1778.0	1710.5	1654.2	1599.4	1564.2	1510.7	1444.6	1379.9	1329.3	1294.1
37.5°	1804.7	1675.3	1564.2	1472.8	1403.8	1365.9	1285.7	1226.6	1171.7	1154.9	1132.4
40°	1730.2	1538.9	1378.5	1259.0	1171.7	1115.5	1035.3	994.5	973.4	965.0	960.7
42.5°	1630.3	1387.0	1173.1	1025.4	931.2	867.9	814.5	789.1	787.7	786.3	786.3
45°	1523.4	1223.8	973.4	797.6	714.6	658.3	633.0	623.1	631.6	630.2	631.6
47.5°	1457.3	1100.0	790.5	603.5	540.2	503.6	490.9	495.1	502.2	499.4	499.4
50°	1448.9	1036.7	668.2	469.8	422.0	403.7	400.9	400.9	405.1	402.3	400.9
52.5°	1479.8	1026.9	604.9	403.7	365.7	350.3	347.4	346.0	344.6	336.2	329.2
55°	1533.3	1049.4	586.6	386.8	347.4	330.6	326.3	323.5	317.9	306.7	294.0
57.5°	1640.2	1119.7	603.5	395.3	353.1	339.0	334.8	334.8	323.5	305.2	287.0
60°	1897.6	1298.3	672.4	427.6	379.8	365.7	368.5	367.1	350.3	323.5	295.4
62.5°	2229.5	1531.8	762.4	472.6	413.6	410.7	424.8	422.0	393.9	353.1	312.3
65°	2382.9	1641.6	787.7	482.5	420.6	433.2	461.4	458.6	423.4	367.1	315.1
66°	2385.7	1641.6	776.5	474.0	410.7	426.2	454.3	452.9	417.8	361.5	309.5
67.5°	2328.0	1596.5	744.1	457.2	391.0	402.3	427.6	426.2	393.9	347.4	298.2
70°	2111.4	1429.2	661.1	427.6	364.3	358.7	367.1	361.5	340.4	308.1	274.3
72.5°	1809.0	1199.9	576.7	405.1	346.0	323.5	317.9	313.7	296.8	278.5	257.4
75°	1424.9	949.5	506.4	388.2	329.2	299.6	289.8	284.1	272.9	260.2	243.4
77.5°	879.2	679.4	441.7	365.7	316.5	287.0	279.9	271.5	254.6	239.1	226.5
80°	392.5	420.6	362.9	319.3	282.7	256.0	244.8	232.1	215.2	205.4	198.3
82.5°	261.6	271.5	263.0	239.1	213.8	192.7	175.8	175.8	173.0	164.6	161.8
85°	167.4	168.8	163.2	147.7	137.9	125.2	118.2	119.6	125.2	123.8	122.4
87.5°	38.0	38.0	45.0	42.2	49.2	52.0	56.3	60.5	68.9	68.9	73.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P156648

CATALOG NUMBER: TLM-E05-LED-E1-T4-8030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1680.9	1680.9	1680.9	1680.9	1680.9
2.5°	1730.2	1733.0	1735.8	1731.6	1733.0
5°	1779.4	1778.0	1785.0	1780.8	1783.6
7.5°	1794.9	1796.3	1801.9	1801.9	1803.3
10°	1796.3	1799.1	1806.1	1810.4	1813.2
12.5°	1803.3	1809.0	1820.2	1823.0	1823.0
15°	1809.0	1811.8	1818.8	1821.6	1824.4
17.5°	1789.3	1783.6	1786.4	1787.9	1786.4
20°	1740.0	1734.4	1733.0	1727.4	1730.2
22.5°	1686.6	1671.1	1661.3	1650.0	1650.0
25°	1621.9	1598.0	1578.3	1558.6	1562.8
27.5°	1561.4	1530.4	1510.7	1498.1	1495.3
30°	1502.3	1470.0	1451.7	1436.2	1436.2
32.5°	1403.8	1381.3	1357.4	1347.6	1346.2
35°	1267.4	1253.3	1233.6	1229.4	1222.4
37.5°	1114.1	1109.8	1093.0	1091.6	1084.5
40°	953.7	956.5	950.9	948.1	943.9
42.5°	793.4	807.4	804.6	803.2	800.4
45°	640.0	649.9	651.3	655.5	662.5
47.5°	503.6	506.4	509.2	507.8	509.2
50°	393.9	386.8	385.4	381.2	385.4
52.5°	317.9	306.7	301.0	295.4	292.6
55°	279.9	268.7	263.0	260.2	257.4
57.5°	270.1	258.8	250.4	244.8	243.4
60°	272.9	256.0	244.8	237.7	236.3
62.5°	279.9	257.4	241.9	234.9	233.5
65°	278.5	254.6	240.5	232.1	230.7
66°	274.3	251.8	237.7	230.7	229.3
67.5°	267.3	247.6	234.9	229.3	226.5
70°	254.6	241.9	232.1	225.1	222.3
72.5°	243.4	233.5	225.1	218.0	216.6
75°	230.7	222.3	213.8	208.2	206.8
77.5°	215.2	206.8	201.2	196.9	195.5
80°	189.9	184.3	178.6	173.0	173.0
82.5°	157.5	153.3	147.7	143.5	142.1
85°	121.0	121.0	116.8	112.5	111.1
87.5°	71.7	70.3	70.3	66.1	66.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)