

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: P152386

Luminaire Tested: **TLM-F04-LED-E1-SL4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P152386
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33680)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F04-LED-E1-SL4-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

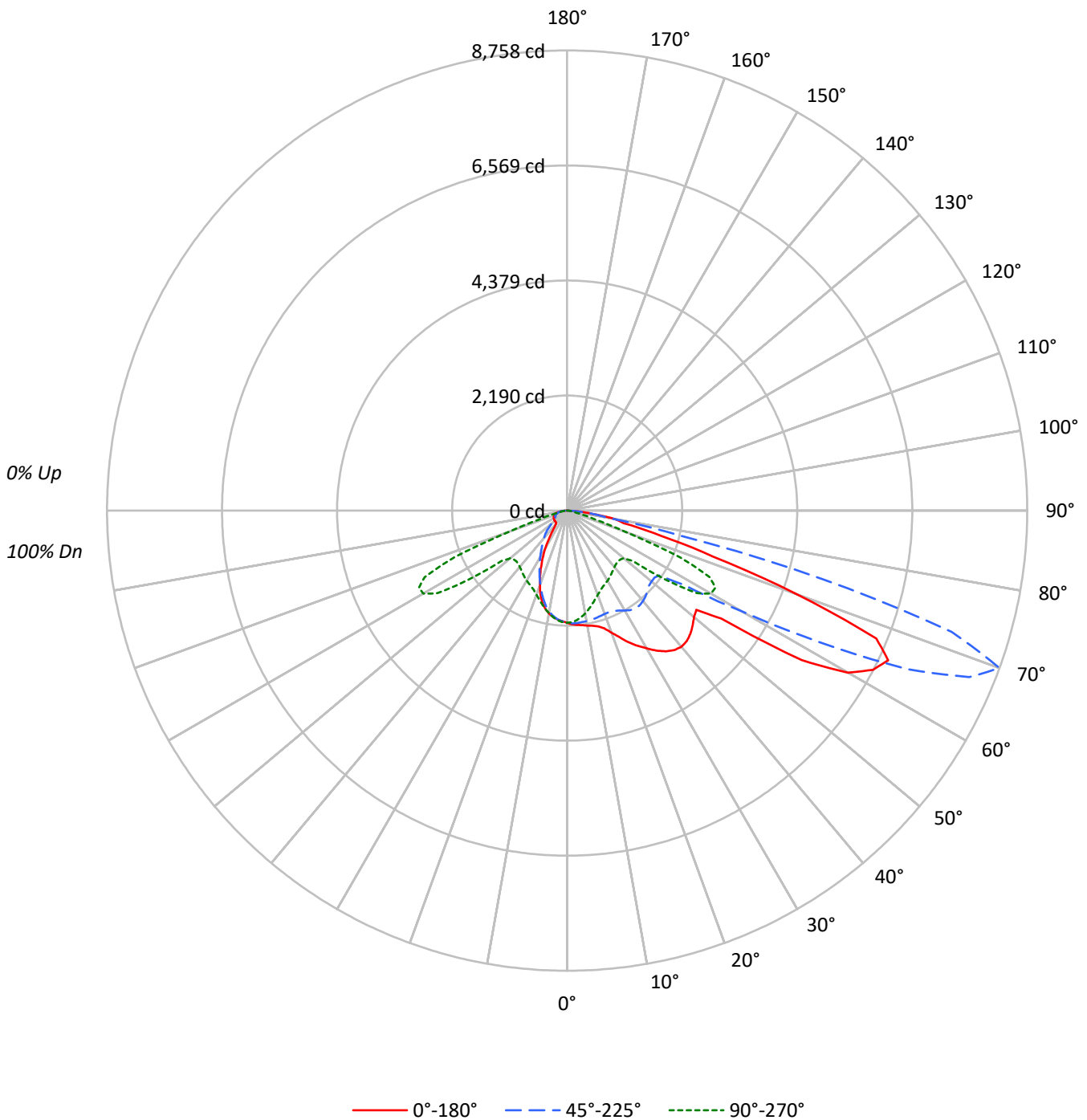
Lumens per Lamp: N/A
Luminaire Lumens: 10009.4 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.07 / 1.36
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

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



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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	106	100	94	89	103	97	92	88	93	89	85	89	86	82	85	82	80	78					78			
2	93	83	74	67	90	81	73	66	77	70	64	73	68	63	70	66	61	59					59			
3	83	70	59	51	80	68	58	51	65	57	50	62	55	49	59	53	48	45					45			
4	74	60	49	41	72	58	48	40	55	47	40	53	45	39	51	44	39	36					36			
5	67	52	41	33	65	51	41	33	48	40	33	46	38	32	44	37	32	29					29			
6	61	46	36	28	59	45	35	28	43	34	28	41	33	27	39	32	27	25					25			
7	57	41	31	24	55	40	31	24	39	30	24	37	29	23	36	29	23	21					21			
8	53	37	28	21	51	36	27	21	35	27	21	34	26	21	32	26	20	18					18			
9	49	34	25	19	47	33	25	19	32	24	18	31	24	18	30	23	18	16					16			
10	46	31	23	17	44	31	22	17	30	22	17	29	21	16	28	21	16	14					14			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	34313	34313	34313
5°	35226	33787	33568
10°	36260	32390	32446
15°	37965	30677	30226
20°	42249	29119	25895
25°	48990	28389	20701
30°	56152	28557	15462
35°	64105	28773	10057
40°	70942	29371	6940
45°	75365	31024	6927
50°	78815	35258	7706
55°	100282	64534	8414
60°	198252	101502	9437
65°	256277	113777	10606
70°	218046	53793	11936
75°	114623	19770	14724
80°	85264	10760	15987
85°	49346	10415	16037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.5	2.0
10°-20°	546.2	5.5
20°-30°	808.6	8.1
30°-40°	1021.8	10.2
40°-50°	1155.7	11.5
50°-60°	1644.5	16.4
60°-70°	3062.8	30.6
70°-80°	1403.7	14.0
80°-90°	166.6	1.7
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°	1554.3	15.5
0°-40°	2576.2	25.7
0°-60°	5376.4	53.7
0°-90°	10009.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10009.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2136	2136	2136	2136	2136	
5°	2184	2148	2095	2078	2082	210
15°	2283	2118	1844	1746	1817	657
25°	2764	2106	1602	1248	1168	1283
35°	3269	2275	1467	836	513	2043
45°	3317	2161	1366	547	305	2552
55°	3580	2148	2304	278	300	3762
65°	6742	7139	2993	248	279	6216
75°	1847	5019	318	195	237	2270
85°	268	235	56	89	87	337
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8
2.5°	2168.5	2174.2	2167.4	2166.3	2166.3	2165.1	2158.3	2157.2	2148.2	2149.3	2151.6
5°	2184.3	2186.6	2182.1	2180.9	2178.7	2174.2	2168.5	2161.7	2155.0	2148.2	2142.5
7.5°	2200.1	2197.9	2194.5	2194.5	2191.1	2184.3	2173.0	2164.0	2149.3	2141.4	2131.2
10°	2222.7	2219.3	2214.8	2212.6	2206.9	2196.7	2180.9	2168.5	2150.4	2134.6	2117.7
12.5°	2244.2	2243.1	2236.3	2232.9	2223.9	2213.7	2194.5	2175.3	2151.6	2126.7	2104.1
15°	2282.6	2278.1	2271.3	2264.5	2249.8	2236.3	2206.9	2184.3	2150.4	2117.7	2082.7
17.5°	2349.2	2341.3	2334.5	2319.9	2301.8	2278.1	2235.2	2196.7	2150.4	2103.0	2063.5
20°	2471.2	2454.3	2445.2	2426.0	2394.4	2351.5	2284.8	2222.7	2153.8	2092.8	2039.8
22.5°	2609.0	2597.7	2585.3	2572.9	2523.2	2461.0	2370.7	2278.1	2174.2	2088.3	2020.6
25°	2763.7	2749.0	2742.3	2720.8	2674.5	2603.3	2480.2	2351.5	2220.5	2106.4	2020.6
27.5°	2901.5	2897.0	2895.9	2871.0	2827.0	2743.4	2597.7	2443.0	2283.7	2143.7	2037.5
30°	3026.9	3022.4	3020.1	3006.6	2955.7	2856.3	2698.2	2524.3	2352.6	2195.6	2069.1
32.5°	3160.2	3145.5	3138.7	3112.7	3055.1	2938.8	2758.1	2577.4	2406.8	2246.4	2104.1
35°	3268.6	3256.2	3242.6	3205.3	3124.0	2986.2	2784.1	2595.4	2428.3	2274.7	2122.2
37.5°	3347.6	3335.2	3316.0	3268.6	3168.1	3002.0	2782.9	2589.8	2420.4	2270.2	2125.6
40°	3382.7	3370.2	3349.9	3290.0	3176.0	2993.0	2761.5	2563.8	2396.7	2246.4	2112.0
42.5°	3369.1	3360.1	3334.1	3276.5	3151.1	2952.3	2718.5	2515.2	2351.5	2208.0	2081.5
45°	3317.1	3310.4	3285.5	3224.5	3094.6	2886.8	2655.3	2454.3	2297.3	2160.6	2040.9
47.5°	3239.2	3237.0	3212.1	3152.3	3023.5	2821.3	2589.8	2394.4	2243.1	2114.3	2007.0
50°	3153.4	3142.1	3129.7	3074.3	2956.9	2764.9	2542.4	2357.1	2212.6	2097.4	1992.3
52.5°	3099.2	3095.8	3084.5	3034.8	2921.8	2732.1	2520.9	2343.6	2210.3	2094.0	1984.4
55°	3580.3	3588.2	3484.3	3268.6	3078.8	2822.5	2585.3	2412.5	2265.6	2148.2	2068.0
57.5°	5295.9	5260.9	5082.5	4654.4	4171.0	3532.9	3073.2	2794.2	2612.4	2632.7	2673.4
60°	6170.1	6163.3	6130.6	5964.5	5642.7	5157.0	4618.3	4000.5	3803.9	3825.4	3841.2
62.5°	6560.9	6571.0	6595.9	6533.8	6449.1	6307.9	6039.1	5790.6	5527.5	5429.2	5166.0
65°	6741.6	6759.7	6816.1	6851.1	6883.9	6908.7	7014.9	7306.3	7498.3	7139.2	6303.4
67.5°	6367.7	6454.7	6641.1	6822.9	6985.6	7217.1	7576.2	8252.8	8723.7	8282.1	7070.3
70°	4642.0	4760.6	4974.0	5536.5	6137.3	6662.5	7358.3	8388.3	9098.7	8757.6	7260.0
72.5°	2910.6	2943.3	3038.2	3244.9	3691.0	4365.3	5581.7	7126.7	7946.7	7674.5	6136.2
75°	1846.6	1857.9	1854.5	1902.0	1977.6	2124.5	2605.6	4209.4	5443.9	5019.2	3419.9
77.5°	1100.1	1117.0	1123.8	1138.5	1174.6	1226.6	1266.1	1432.1	2282.6	2215.9	1241.2
80°	921.6	935.2	923.9	920.5	897.9	882.1	901.3	882.1	818.8	788.3	726.2
82.5°	487.9	486.8	483.4	516.2	582.8	634.7	674.3	665.2	602.0	512.8	434.8
85°	267.7	276.7	276.7	288.0	277.8	279.0	288.0	303.8	281.2	234.9	192.0
87.5°	22.6	35.0	28.2	35.0	47.4	33.9	32.8	32.8	28.2	20.3	18.1
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8
2.5°	2145.9	2143.7	2139.1	2135.8	2135.8	2130.1	2126.7	2124.5	2123.3	2118.8	2118.8
5°	2139.1	2131.2	2123.3	2117.7	2114.3	2108.7	2099.6	2095.1	2089.5	2084.9	2082.7
7.5°	2124.5	2109.8	2097.4	2088.3	2077.0	2068.0	2056.7	2046.5	2036.4	2031.9	2029.6
10°	2101.9	2082.7	2063.5	2046.5	2030.7	2014.9	2000.2	1985.5	1973.1	1964.1	1955.1
12.5°	2080.4	2051.1	2026.2	2001.4	1976.5	1957.3	1937.0	1915.5	1897.4	1880.5	1876.0
15°	2051.1	2017.2	1985.5	1955.1	1924.6	1892.9	1868.1	1844.4	1815.0	1795.8	1781.1
17.5°	2023.9	1983.3	1944.9	1908.7	1871.5	1838.7	1801.4	1769.8	1740.5	1711.1	1689.6
20°	1994.6	1950.5	1909.9	1869.2	1828.6	1786.8	1743.8	1703.2	1667.0	1632.0	1597.0
22.5°	1968.6	1923.4	1883.9	1839.8	1794.7	1747.2	1697.5	1646.7	1604.9	1559.7	1519.1
25°	1952.8	1903.1	1862.4	1819.5	1769.8	1717.9	1661.4	1601.5	1550.7	1498.8	1450.2
27.5°	1952.8	1888.4	1846.6	1803.7	1752.9	1697.5	1635.4	1569.9	1512.3	1454.7	1394.9
30°	1969.7	1890.7	1834.2	1789.0	1737.1	1677.2	1608.3	1539.4	1476.2	1408.4	1350.8
32.5°	1985.5	1895.2	1825.2	1767.6	1707.7	1649.0	1578.9	1505.5	1435.5	1371.1	1310.1
35°	1995.7	1895.2	1808.2	1734.8	1667.0	1609.4	1540.5	1467.1	1396.0	1332.7	1276.3
37.5°	1996.8	1886.2	1781.1	1697.5	1626.4	1566.5	1501.0	1432.1	1364.4	1305.6	1258.2
40°	1985.5	1868.1	1754.0	1658.0	1583.5	1522.5	1462.6	1400.5	1339.5	1290.9	1250.3
42.5°	1965.2	1848.9	1728.0	1626.4	1548.5	1485.2	1429.9	1376.8	1323.7	1281.9	1248.0
45°	1934.7	1822.9	1704.3	1607.2	1530.4	1463.7	1409.5	1365.5	1320.3	1285.3	1251.4
47.5°	1907.6	1813.9	1712.2	1619.6	1539.4	1470.5	1415.2	1377.9	1342.9	1319.2	1272.9
50°	1902.0	1809.4	1715.6	1629.8	1548.5	1478.4	1429.9	1410.7	1400.5	1385.8	1314.7
52.5°	1886.2	1808.2	1740.5	1693.0	1641.1	1608.3	1557.5	1575.6	1564.3	1512.3	1383.6
55°	2052.2	2074.8	2138.0	2228.4	2312.0	2331.2	2325.5	2304.0	2190.0	1883.9	1549.6
57.5°	2821.3	2949.0	3068.7	3121.8	3115.0	3055.1	3012.2	2925.2	2760.3	2387.6	1877.1
60°	3889.8	3910.1	3846.9	3753.1	3595.0	3462.8	3321.7	3159.0	2919.6	2554.8	2078.2
62.5°	4873.5	4600.2	4319.0	4054.7	3814.1	3604.0	3407.5	3180.5	2868.8	2488.1	2052.2
65°	5568.1	4989.8	4546.0	4166.5	3826.5	3532.9	3287.8	2993.0	2641.7	2298.4	1902.0
67.5°	5926.1	5039.5	4358.5	3829.9	3347.6	2941.0	2614.6	2327.8	2066.9	1916.6	1664.8
70°	5526.3	4277.2	3328.4	2731.0	2153.8	1726.9	1364.4	1145.2	1069.6	1211.9	1260.4
72.5°	4117.9	2784.1	1979.9	1531.5	1173.5	935.2	717.2	563.6	458.6	481.1	624.6
75°	1947.1	1201.7	849.3	646.0	513.9	425.8	347.9	318.5	266.5	221.4	207.8
77.5°	757.9	552.3	456.3	334.3	237.2	190.9	162.6	157.0	160.4	155.9	153.6
80°	577.1	390.8	245.1	179.6	154.7	136.7	120.8	116.3	118.6	124.2	129.9
82.5°	321.9	201.0	149.1	129.9	116.3	99.4	90.4	83.6	84.7	91.5	103.9
85°	124.2	97.1	89.2	85.8	80.2	64.4	55.3	56.5	64.4	76.8	76.8
87.5°	13.6	13.6	18.1	13.6	13.6	13.6	12.4	14.7	15.8	20.3	23.7
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8	2135.8
2.5°	2116.6	2116.6	2116.6	2114.3	2115.4	2110.9	2110.9	2107.5	2113.2	2109.8	2108.7
5°	2083.8	2082.7	2078.2	2078.2	2078.2	2078.2	2081.5	2072.5	2079.3	2079.3	2075.9
7.5°	2028.5	2028.5	2016.0	2022.8	2020.6	2023.9	2028.5	2023.9	2030.7	2035.2	2031.9
10°	1951.7	1951.7	1941.5	1949.4	1946.0	1953.9	1961.8	1957.3	1961.8	1968.6	1970.9
12.5°	1867.0	1862.4	1853.4	1856.8	1856.8	1861.3	1864.7	1870.3	1876.0	1885.0	1889.5
15°	1768.7	1761.9	1750.6	1750.6	1743.8	1746.1	1752.9	1755.1	1766.4	1778.9	1793.5
17.5°	1668.2	1651.2	1638.8	1624.1	1612.8	1621.9	1629.8	1635.4	1644.5	1663.7	1673.8
20°	1573.3	1539.4	1515.7	1496.5	1484.1	1489.7	1499.9	1506.7	1514.6	1519.1	1522.5
22.5°	1479.6	1441.2	1408.4	1384.7	1364.4	1370.0	1365.5	1362.1	1367.7	1353.1	1351.9
25°	1398.2	1353.1	1309.0	1280.8	1255.9	1248.0	1224.3	1218.7	1202.8	1190.4	1181.4
27.5°	1339.5	1280.8	1232.2	1199.5	1159.9	1130.6	1100.1	1069.6	1052.6	1032.3	1022.1
30°	1293.2	1231.1	1173.5	1118.1	1066.2	1021.0	980.3	940.8	913.7	884.3	865.1
32.5°	1250.3	1192.7	1122.7	1047.0	977.0	926.1	873.1	827.9	785.0	746.6	718.3
35°	1220.9	1156.5	1067.3	974.7	895.6	835.8	779.3	714.9	663.0	613.3	582.8
37.5°	1205.1	1126.0	1016.5	913.7	825.6	757.9	687.8	613.3	550.0	503.7	457.4
40°	1192.7	1095.6	971.3	859.5	766.9	685.6	604.2	516.2	446.1	397.6	361.4
42.5°	1179.1	1061.7	931.8	816.6	713.8	618.9	520.7	426.9	360.3	326.4	310.6
45°	1164.4	1032.3	894.5	775.9	661.8	546.6	433.7	346.7	307.2	295.9	295.9
47.5°	1161.1	1013.1	867.4	736.4	603.1	463.1	353.5	299.3	288.0	290.3	294.8
50°	1174.6	1007.5	843.7	690.1	525.2	375.0	299.3	281.2	283.5	290.3	297.0
52.5°	1207.4	1012.0	818.8	625.7	432.6	309.5	276.7	275.6	282.4	292.5	299.3
55°	1262.7	1012.0	771.4	529.7	345.6	277.8	268.8	273.3	282.4	291.4	297.0
57.5°	1381.3	1001.8	687.8	423.5	289.1	266.5	266.5	272.2	280.1	289.1	293.7
60°	1522.5	988.3	570.4	327.5	260.9	257.5	265.4	272.2	279.0	286.9	291.4
62.5°	1531.5	953.2	451.8	271.1	246.2	251.9	264.3	273.3	275.6	281.2	286.9
65°	1407.3	831.3	359.2	242.8	239.4	248.5	260.9	267.7	268.8	271.1	276.7
67.5°	1232.2	677.7	290.3	229.3	232.7	242.8	249.6	255.3	258.6	264.3	265.4
70°	1012.0	544.4	248.5	215.7	219.1	230.4	236.1	241.7	248.5	255.3	251.9
72.5°	717.2	423.5	218.0	201.0	205.6	215.7	222.5	227.0	232.7	239.4	234.9
75°	304.9	295.9	188.6	181.8	188.6	195.4	202.2	208.9	214.6	218.0	218.0
77.5°	155.9	173.9	162.6	162.6	167.2	173.9	179.6	186.4	189.7	193.1	197.7
80°	132.1	134.4	136.7	141.2	145.7	152.5	158.1	163.8	164.9	166.0	168.3
82.5°	109.6	114.1	116.3	123.1	126.5	128.8	132.1	132.1	134.4	134.4	131.0
85°	79.1	84.7	88.1	89.2	88.1	89.2	90.4	92.6	98.3	98.3	93.7
87.5°	22.6	21.5	27.1	28.2	30.5	35.0	39.5	47.4	49.7	52.0	52.0
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: P152386

CATALOG NUMBER: TLM-F04-LED-E1-SL4-7050

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2135.8	2135.8	2135.8	2135.8
2.5°	2107.5	2109.8	2105.3	2106.4
5°	2075.9	2080.4	2074.8	2081.5
7.5°	2035.2	2042.0	2040.9	2039.8
10°	1976.5	1985.5	1985.5	1988.9
12.5°	1902.0	1907.6	1912.1	1914.4
15°	1801.4	1811.6	1817.3	1817.3
17.5°	1680.6	1687.4	1690.8	1686.2
20°	1527.0	1524.7	1525.9	1514.6
22.5°	1349.7	1353.1	1342.9	1345.2
25°	1175.7	1170.1	1174.6	1167.8
27.5°	1007.5	1008.6	996.2	1001.8
30°	847.1	841.4	825.6	833.5
32.5°	692.3	677.7	660.7	650.6
35°	546.6	524.1	516.2	512.8
37.5°	429.2	404.3	396.4	387.4
40°	341.1	332.1	328.7	330.9
42.5°	306.1	306.1	308.3	309.5
45°	297.0	300.4	303.8	304.9
47.5°	298.2	301.6	306.1	307.2
50°	300.4	303.8	307.2	308.3
52.5°	301.6	301.6	303.8	304.9
55°	299.3	298.2	299.3	300.4
57.5°	294.8	292.5	293.7	297.0
60°	292.5	289.1	291.4	293.7
62.5°	286.9	285.7	288.0	289.1
65°	274.5	275.6	279.0	279.0
67.5°	263.2	264.3	265.4	266.5
70°	249.6	250.7	253.0	254.1
72.5°	233.8	238.3	241.7	246.2
75°	221.4	225.9	232.7	237.2
77.5°	199.9	203.3	211.2	216.9
80°	169.4	168.3	169.4	172.8
82.5°	129.9	129.9	128.8	127.6
85°	91.5	90.4	87.0	87.0
87.5°	49.7	48.6	47.4	45.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)