

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: P152385

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P152385
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
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

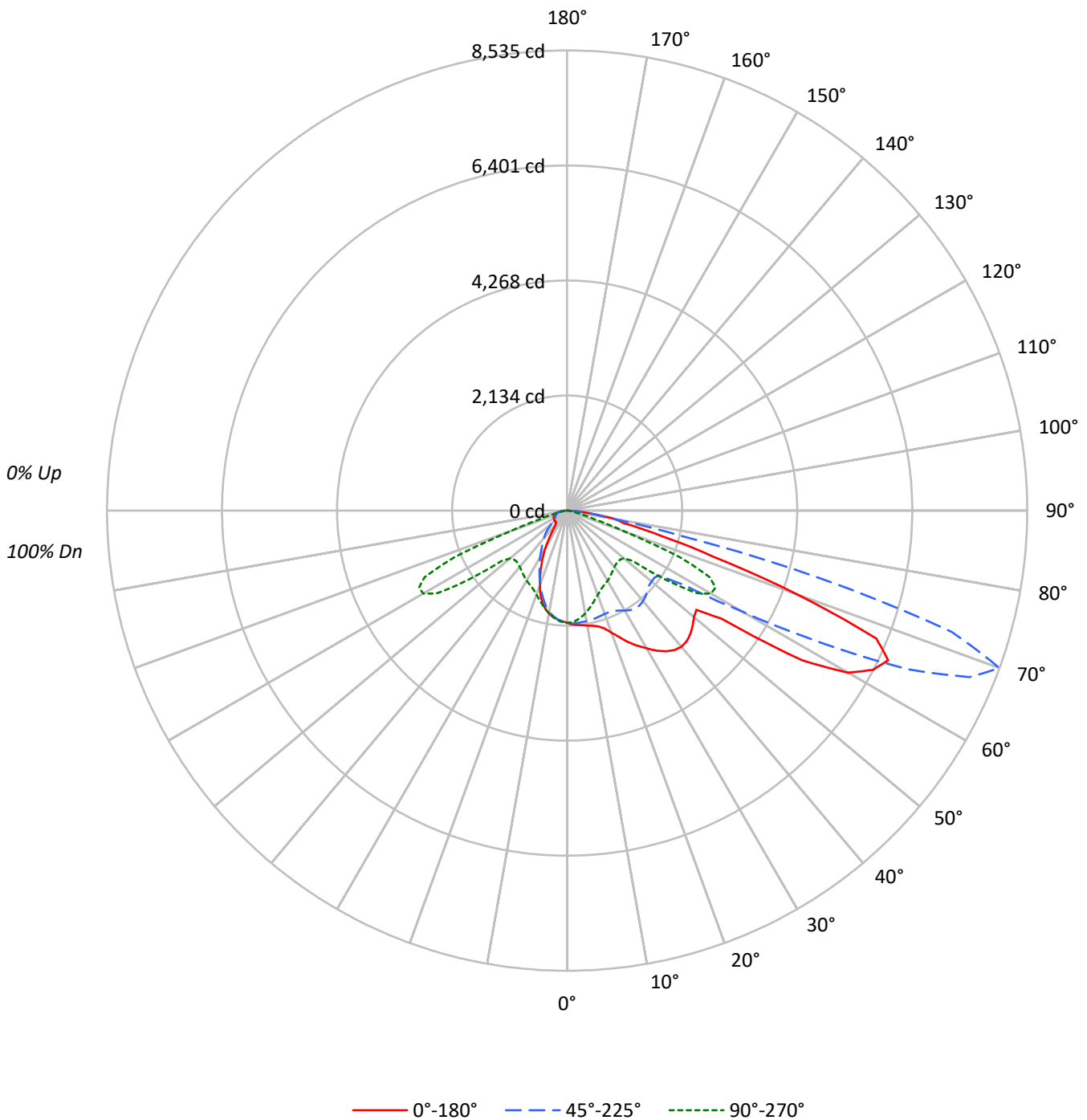
Lumens per Lamp: N/A
Luminaire Lumens: 9754.8 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.07 / 1.36
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

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°	33439	33439	33439
5°	34331	32928	32715
10°	35338	31566	31620
15°	36998	29895	29456
20°	41174	28379	25235
25°	47744	27667	20174
30°	54723	27832	15069
35°	62473	28042	9800
40°	69137	28625	6763
45°	73450	30234	6752
50°	76810	34361	7511
55°	97730	62892	8201
60°	193207	98922	9196
65°	249758	110884	10336
70°	212499	52426	11635
75°	111706	19267	14345
80°	83099	10492	15580
85°	48092	10138	15631



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.5	2.0
10°-20°	532.3	5.5
20°-30°	788.0	8.1
30°-40°	995.9	10.2
40°-50°	1126.3	11.5
50°-60°	1602.7	16.4
60°-70°	2984.9	30.6
70°-80°	1368.0	14.0
80°-90°	162.4	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°	1514.8	15.5
0°-40°	2510.6	25.7
0°-60°	5239.6	53.7
0°-90°	9754.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9754.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2081	2081	2081	2081	2081	
5°	2129	2094	2042	2025	2029	204
15°	2224	2064	1797	1702	1771	640
25°	2693	2053	1561	1216	1138	1251
35°	3185	2217	1430	814	500	1991
45°	3233	2106	1331	533	297	2487
55°	3489	2094	2245	271	293	3666
65°	6570	6958	2917	242	272	6058
75°	1800	4892	310	190	231	2213
85°	261	229	55	87	85	328
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°	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4
2.5°	2113.3	2118.8	2112.2	2111.1	2111.1	2110.0	2103.4	2102.3	2093.5	2094.6	2096.8
5°	2128.8	2131.0	2126.6	2125.5	2123.3	2118.8	2113.3	2106.7	2100.1	2093.5	2088.0
7.5°	2144.2	2142.0	2138.7	2138.7	2135.4	2128.8	2117.7	2108.9	2094.6	2086.9	2077.0
10°	2166.2	2162.9	2158.5	2156.3	2150.8	2140.9	2125.5	2113.3	2095.7	2080.3	2063.8
12.5°	2187.1	2186.0	2179.4	2176.1	2167.3	2157.4	2138.7	2119.9	2096.8	2072.6	2050.6
15°	2224.5	2220.1	2213.5	2206.9	2192.6	2179.4	2150.8	2128.8	2095.7	2063.8	2029.7
17.5°	2289.5	2281.8	2275.1	2260.8	2243.2	2220.1	2178.3	2140.9	2095.7	2049.5	2011.0
20°	2408.3	2391.8	2383.0	2364.3	2333.5	2291.7	2226.7	2166.2	2099.0	2039.6	1987.9
22.5°	2542.6	2531.6	2519.5	2507.4	2459.0	2398.4	2310.4	2220.1	2118.8	2035.2	1969.2
25°	2693.4	2679.1	2672.5	2651.6	2606.5	2537.1	2417.1	2291.7	2164.0	2052.8	1969.2
27.5°	2827.7	2823.3	2822.2	2798.0	2755.1	2673.6	2531.6	2380.8	2225.6	2089.1	1985.7
30°	2949.9	2945.5	2943.3	2930.1	2880.5	2783.7	2629.6	2460.1	2292.8	2139.8	2016.5
32.5°	3079.8	3065.4	3058.8	3033.5	2977.4	2864.0	2687.9	2511.8	2345.6	2189.3	2050.6
35°	3185.4	3173.3	3160.1	3123.8	3044.5	2910.3	2713.2	2529.4	2366.5	2216.8	2068.2
37.5°	3262.5	3250.4	3231.7	3185.4	3087.5	2925.7	2712.1	2523.9	2358.8	2212.4	2071.5
40°	3296.6	3284.5	3264.7	3206.3	3095.2	2916.9	2691.2	2498.6	2335.7	2189.3	2058.3
42.5°	3283.4	3274.6	3249.3	3193.1	3071.0	2877.2	2649.4	2451.3	2291.7	2151.9	2028.6
45°	3232.8	3226.2	3201.9	3142.5	3015.9	2813.4	2587.7	2391.8	2238.8	2105.6	1989.0
47.5°	3156.8	3154.6	3130.4	3072.1	2946.6	2749.5	2523.9	2333.5	2186.0	2060.5	1955.9
50°	3073.2	3062.1	3050.0	2996.1	2881.6	2694.5	2477.7	2297.2	2156.3	2044.0	1941.6
52.5°	3020.3	3017.0	3006.0	2957.6	2847.5	2662.6	2456.8	2284.0	2154.1	2040.7	1933.9
55°	3489.2	3496.9	3395.7	3185.4	3000.5	2750.6	2519.5	2351.1	2208.0	2093.5	2015.4
57.5°	5161.2	5127.1	4953.1	4536.0	4064.9	3443.0	2995.0	2723.1	2545.9	2565.7	2605.4
60°	6013.1	6006.5	5974.6	5812.8	5499.1	5025.8	4500.8	3898.7	3707.2	3728.1	3743.5
62.5°	6394.0	6403.9	6428.1	6367.5	6285.0	6147.4	5885.4	5643.3	5386.8	5291.1	5034.6
65°	6570.1	6587.7	6642.7	6676.8	6708.8	6733.0	6836.4	7120.4	7307.5	6957.5	6143.0
67.5°	6205.7	6290.5	6472.1	6649.3	6807.8	7033.5	7383.5	8042.8	8501.8	8071.4	6890.4
70°	4523.9	4639.5	4847.5	5395.6	5981.2	6493.0	7171.1	8174.9	8867.2	8534.8	7075.3
72.5°	2836.5	2868.4	2960.9	3162.3	3597.1	4254.2	5439.7	6945.4	7744.5	7479.3	5980.1
75°	1799.6	1810.7	1807.3	1853.6	1927.3	2070.4	2539.3	4102.3	5305.4	4891.5	3332.9
77.5°	1072.1	1088.6	1095.2	1109.5	1144.7	1195.4	1233.9	1395.7	2224.5	2159.6	1209.7
80°	898.2	911.4	900.4	897.1	875.1	859.6	878.4	859.6	798.0	768.3	707.8
82.5°	475.5	474.4	471.1	503.0	568.0	618.6	657.1	648.3	586.7	499.7	423.8
85°	260.9	269.7	269.7	280.7	270.8	271.9	280.7	296.1	274.1	228.9	187.1
87.5°	22.0	34.1	27.5	34.1	46.2	33.0	31.9	31.9	27.5	19.8	17.6
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°	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4
2.5°	2091.3	2089.1	2084.7	2081.4	2081.4	2075.9	2072.6	2070.4	2069.3	2064.9	2064.9
5°	2084.7	2077.0	2069.3	2063.8	2060.5	2055.0	2046.2	2041.8	2036.3	2031.9	2029.7
7.5°	2070.4	2056.1	2044.0	2035.2	2024.2	2015.4	2004.4	1994.5	1984.6	1980.2	1978.0
10°	2048.4	2029.7	2011.0	1994.5	1979.1	1963.6	1949.3	1935.0	1922.9	1914.1	1905.3
12.5°	2027.5	1998.9	1974.7	1950.4	1926.2	1907.5	1887.7	1866.8	1849.2	1832.7	1828.3
15°	1998.9	1965.9	1935.0	1905.3	1875.6	1844.8	1820.6	1797.4	1768.8	1750.1	1735.8
17.5°	1972.5	1932.8	1895.4	1860.2	1823.9	1791.9	1755.6	1724.8	1696.2	1667.6	1646.6
20°	1943.8	1900.9	1861.3	1821.7	1782.0	1741.3	1699.5	1659.9	1624.6	1590.5	1556.4
22.5°	1918.5	1874.5	1836.0	1793.0	1749.0	1702.8	1654.4	1604.8	1564.1	1520.1	1480.4
25°	1903.1	1854.7	1815.1	1773.2	1724.8	1674.2	1619.1	1560.8	1511.3	1460.6	1413.3
27.5°	1903.1	1840.4	1799.6	1757.8	1708.3	1654.4	1593.8	1530.0	1473.8	1417.7	1359.4
30°	1919.6	1842.6	1787.5	1743.5	1692.9	1634.5	1567.4	1500.3	1438.6	1372.6	1316.4
32.5°	1935.0	1847.0	1778.7	1722.6	1664.3	1607.0	1538.8	1467.2	1399.0	1336.2	1276.8
35°	1944.9	1847.0	1762.2	1690.7	1624.6	1568.5	1501.4	1429.8	1360.5	1298.8	1243.8
37.5°	1946.0	1838.2	1735.8	1654.4	1585.0	1526.7	1462.8	1395.7	1329.6	1272.4	1226.2
40°	1935.0	1820.6	1709.4	1615.8	1543.2	1483.7	1425.4	1364.9	1305.4	1258.1	1218.5
42.5°	1915.2	1801.8	1684.1	1585.0	1509.1	1447.4	1393.5	1341.8	1290.0	1249.3	1216.3
45°	1885.5	1776.5	1661.0	1566.3	1491.4	1426.5	1373.7	1330.7	1286.7	1252.6	1219.6
47.5°	1859.1	1767.7	1668.7	1578.4	1500.3	1433.1	1379.2	1342.9	1308.7	1285.6	1240.5
50°	1853.6	1763.3	1672.0	1588.3	1509.1	1440.8	1393.5	1374.8	1364.9	1350.6	1281.2
52.5°	1838.2	1762.2	1696.2	1649.9	1599.3	1567.4	1517.9	1535.5	1524.5	1473.8	1348.4
55°	2000.0	2022.0	2083.6	2171.7	2253.1	2271.8	2266.3	2245.4	2134.3	1836.0	1510.2
57.5°	2749.5	2873.9	2990.6	3042.3	3035.7	2977.4	2935.6	2850.8	2690.1	2326.9	1829.4
60°	3790.8	3810.6	3749.0	3657.6	3503.5	3374.7	3237.2	3078.7	2845.3	2489.8	2025.3
62.5°	4749.5	4483.2	4209.1	3951.5	3717.1	3512.3	3320.8	3099.6	2795.8	2424.8	2000.0
65°	5426.5	4862.9	4430.3	4060.5	3729.2	3443.0	3204.1	2916.9	2574.5	2239.9	1853.6
67.5°	5775.4	4911.3	4247.6	3732.5	3262.5	2866.2	2548.1	2268.5	2014.3	1867.9	1622.4
70°	5385.7	4168.4	3243.8	2661.5	2099.0	1683.0	1329.6	1116.1	1042.4	1181.1	1228.4
72.5°	4013.2	2713.2	1929.5	1492.5	1143.6	911.4	698.9	549.2	446.9	468.9	608.7
75°	1897.6	1171.1	827.7	629.6	500.8	415.0	339.0	310.4	259.8	215.7	202.5
77.5°	738.6	538.2	444.7	325.8	231.1	186.0	158.5	153.0	156.3	151.9	149.7
80°	562.5	380.8	238.9	175.0	150.8	133.2	117.8	113.4	115.6	121.1	126.6
82.5°	313.7	195.9	145.3	126.6	113.4	96.9	88.1	81.5	82.6	89.2	101.3
85°	121.1	94.7	87.0	83.7	78.1	62.7	53.9	55.0	62.7	74.8	74.8
87.5°	13.2	13.2	17.6	13.2	13.2	13.2	12.1	14.3	15.4	19.8	23.1
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4	2081.4
2.5°	2062.7	2062.7	2062.7	2060.5	2061.6	2057.2	2057.2	2053.9	2059.4	2056.1	2055.0
5°	2030.8	2029.7	2025.3	2025.3	2025.3	2025.3	2028.6	2019.8	2026.4	2026.4	2023.1
7.5°	1976.9	1976.9	1964.7	1971.4	1969.2	1972.5	1976.9	1972.5	1979.1	1983.5	1980.2
10°	1902.0	1902.0	1892.1	1899.8	1896.5	1904.2	1911.9	1907.5	1911.9	1918.5	1920.7
12.5°	1819.5	1815.1	1806.2	1809.6	1809.6	1814.0	1817.3	1822.8	1828.3	1837.1	1841.5
15°	1723.7	1717.1	1706.1	1706.1	1699.5	1701.7	1708.3	1710.5	1721.5	1733.6	1747.9
17.5°	1625.7	1609.2	1597.1	1582.8	1571.8	1580.6	1588.3	1593.8	1602.6	1621.3	1631.2
20°	1533.3	1500.3	1477.1	1458.4	1446.3	1451.8	1461.7	1468.3	1476.0	1480.4	1483.7
22.5°	1441.9	1404.5	1372.6	1349.5	1329.6	1335.1	1330.7	1327.4	1332.9	1318.6	1317.5
25°	1362.7	1318.6	1275.7	1248.2	1224.0	1216.3	1193.2	1187.7	1172.2	1160.1	1151.3
27.5°	1305.4	1248.2	1200.9	1168.9	1130.4	1101.8	1072.1	1042.4	1025.9	1006.0	996.1
30°	1260.3	1199.8	1143.6	1089.7	1039.1	995.0	955.4	916.9	890.5	861.8	843.1
32.5°	1218.5	1162.3	1094.1	1020.3	952.1	902.6	850.8	806.8	765.0	727.6	700.0
35°	1189.9	1127.1	1040.2	949.9	872.9	814.5	759.5	696.7	646.1	597.7	568.0
37.5°	1174.4	1097.4	990.6	890.5	804.6	738.6	670.3	597.7	536.0	490.9	445.8
40°	1162.3	1067.7	946.6	837.6	747.4	668.1	588.9	503.0	434.8	387.4	352.2
42.5°	1149.1	1034.7	908.1	795.8	695.6	603.2	507.4	416.1	351.1	318.1	302.7
45°	1134.8	1006.0	871.8	756.2	645.0	532.7	422.7	337.9	299.4	288.4	288.4
47.5°	1131.5	987.3	845.3	717.7	587.8	451.3	344.5	291.7	280.7	282.9	287.3
50°	1144.7	981.8	822.2	672.5	511.8	365.4	291.7	274.1	276.3	282.9	289.5
52.5°	1176.6	986.2	798.0	609.8	421.6	301.6	269.7	268.6	275.2	285.1	291.7
55°	1230.6	986.2	751.8	516.2	336.8	270.8	262.0	266.4	275.2	284.0	289.5
57.5°	1346.2	976.3	670.3	412.8	281.8	259.8	259.8	265.3	273.0	281.8	286.2
60°	1483.7	963.1	555.9	319.2	254.3	251.0	258.7	265.3	271.9	279.6	284.0
62.5°	1492.5	929.0	440.3	264.2	240.0	245.5	257.6	266.4	268.6	274.1	279.6
65°	1371.5	810.1	350.0	236.7	233.3	242.2	254.3	260.9	262.0	264.2	269.7
67.5°	1200.9	660.4	282.9	223.4	226.7	236.7	243.3	248.8	252.1	257.6	258.7
70°	986.2	530.5	242.2	210.2	213.5	224.5	230.0	235.5	242.2	248.8	245.5
72.5°	698.9	412.8	212.4	195.9	200.3	210.2	216.8	221.2	226.7	233.3	228.9
75°	297.2	288.4	183.8	177.2	183.8	190.4	197.0	203.6	209.1	212.4	212.4
77.5°	151.9	169.5	158.5	158.5	162.9	169.5	175.0	181.6	184.9	188.2	192.6
80°	128.8	131.0	133.2	137.6	142.0	148.6	154.1	159.6	160.7	161.8	164.0
82.5°	106.8	111.2	113.4	120.0	123.3	125.5	128.8	128.8	131.0	131.0	127.7
85°	77.0	82.6	85.9	87.0	85.9	87.0	88.1	90.3	95.8	95.8	91.4
87.5°	22.0	20.9	26.4	27.5	29.7	34.1	38.5	46.2	48.4	50.6	50.6
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: P152385

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2081.4	2081.4	2081.4	2081.4
2.5°	2053.9	2056.1	2051.7	2052.8
5°	2023.1	2027.5	2022.0	2028.6
7.5°	1983.5	1990.1	1989.0	1987.9
10°	1926.2	1935.0	1935.0	1938.3
12.5°	1853.6	1859.1	1863.5	1865.7
15°	1755.6	1765.5	1771.0	1771.0
17.5°	1637.8	1644.4	1647.7	1643.3
20°	1488.1	1485.9	1487.0	1476.0
22.5°	1315.3	1318.6	1308.7	1310.9
25°	1145.8	1140.3	1144.7	1138.1
27.5°	981.8	982.9	970.8	976.3
30°	825.5	820.0	804.6	812.3
32.5°	674.7	660.4	643.9	634.0
35°	532.7	510.7	503.0	499.7
37.5°	418.3	394.1	386.3	377.5
40°	332.4	323.6	320.3	322.5
42.5°	298.3	298.3	300.5	301.6
45°	289.5	292.8	296.1	297.2
47.5°	290.6	293.9	298.3	299.4
50°	292.8	296.1	299.4	300.5
52.5°	293.9	293.9	296.1	297.2
55°	291.7	290.6	291.7	292.8
57.5°	287.3	285.1	286.2	289.5
60°	285.1	281.8	284.0	286.2
62.5°	279.6	278.5	280.7	281.8
65°	267.5	268.6	271.9	271.9
67.5°	256.5	257.6	258.7	259.8
70°	243.3	244.4	246.6	247.7
72.5°	227.8	232.2	235.5	240.0
75°	215.7	220.1	226.7	231.1
77.5°	194.8	198.1	205.8	211.3
80°	165.1	164.0	165.1	168.4
82.5°	126.6	126.6	125.5	124.4
85°	89.2	88.1	84.8	84.8
87.5°	48.4	47.3	46.2	44.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)