

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: P156651

Luminaire Tested: **TLM-E05-LED-E1-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156651
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-T4-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (105) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15504.7 lumens
Efficiency: N/A
Efficacy: 121.8 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

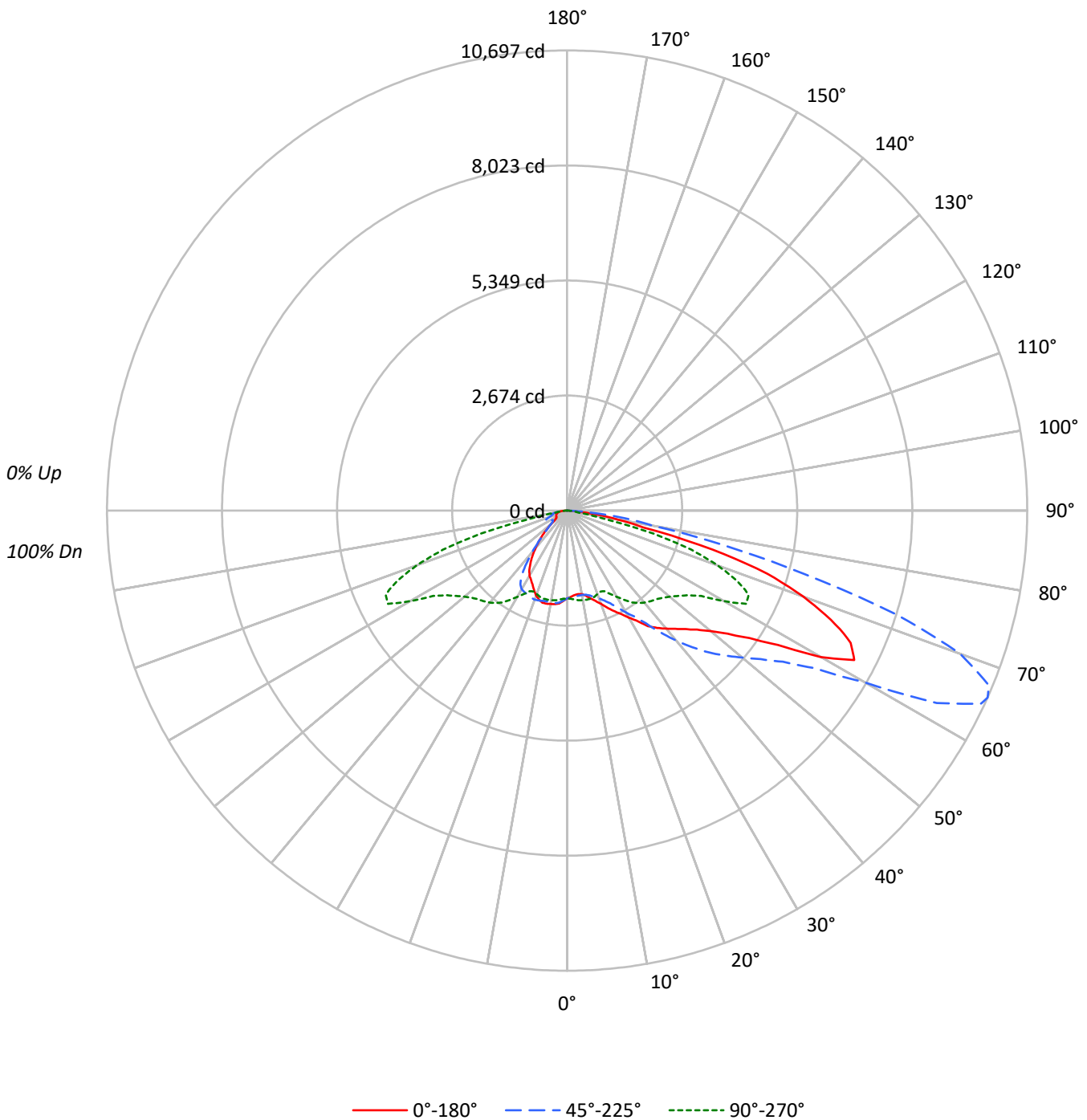
Input Watts (W): 127.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	26504	26504	26504
5°	25647	27072	28230
10°	25944	27881	29029
15°	28426	28448	29780
20°	31862	28511	29030
25°	36878	29634	27188
30°	43024	34701	26148
35°	51903	41208	23527
40°	60654	47307	19426
45°	71481	53541	14773
50°	87881	62796	9454
55°	116892	77489	7077
60°	176497	109208	7452
65°	223193	142743	8607
70°	221382	141038	10245
75°	175584	104457	12597
80°	89022	21972	15713
85°	12975	18064	20103



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.4	1.3
10°-20°	602.5	3.9
20°-30°	1037.8	6.7
30°-40°	1570.2	10.1
40°-50°	2035.1	13.1
50°-60°	2805.8	18.1
60°-70°	4359.3	28.1
70°-80°	2535.0	16.3
80°-90°	360.5	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°	1838.8	11.9
0°-40°	3409.0	22.0
0°-60°	8249.9	53.2
0°-90°	15504.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15504.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2044	2044	2044	2044	2044	
5°	1970	1999	2080	2148	2168	188
15°	2117	2044	2119	2174	2218	607
25°	2577	2382	2071	2165	1900	1202
35°	3278	3203	2603	1837	1486	2049
45°	3898	4665	2919	770	806	3046
55°	5170	6124	3427	397	313	4788
65°	7273	10618	4652	561	280	6884
75°	3504	5709	2085	352	251	3609
85°	87	595	121	144	135	377
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°	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7
2.5°	2006.0	2012.9	2007.7	2009.5	2009.5	2011.2	2011.2	2012.9	2011.2	2016.3	2019.7
5°	1970.1	1973.5	1971.8	1975.3	1978.7	1985.5	1983.8	1992.4	1994.1	1999.2	2007.7
7.5°	1956.4	1953.0	1954.7	1959.9	1963.3	1966.7	1970.1	1977.0	1982.1	1994.1	2000.9
10°	1970.1	1968.4	1970.1	1973.5	1973.5	1975.3	1971.8	1978.7	1982.1	1992.4	1999.2
12.5°	2026.6	2026.6	2023.1	2023.1	2019.7	2016.3	2007.7	2002.6	2000.9	2002.6	2006.0
15°	2117.2	2113.8	2106.9	2101.8	2095.0	2083.0	2071.0	2060.8	2053.9	2043.7	2040.2
17.5°	2206.1	2201.0	2194.2	2187.3	2178.8	2166.8	2148.0	2136.0	2117.2	2105.2	2098.4
20°	2308.7	2298.5	2289.9	2281.4	2264.3	2260.9	2242.0	2221.5	2199.3	2171.9	2168.5
22.5°	2442.1	2425.0	2414.8	2409.6	2392.5	2387.4	2356.6	2327.5	2300.2	2264.3	2255.7
25°	2577.2	2560.1	2555.0	2548.2	2536.2	2529.3	2500.3	2467.8	2431.9	2382.3	2372.0
27.5°	2708.9	2710.6	2696.9	2702.1	2698.7	2686.7	2657.6	2625.1	2597.8	2539.6	2527.6
30°	2873.1	2862.8	2856.0	2866.3	2854.3	2856.0	2830.3	2813.2	2768.8	2734.6	2710.6
32.5°	3044.1	3042.4	3052.7	3059.5	3057.8	3054.4	3033.9	3016.8	2977.4	2927.8	2917.6
35°	3278.4	3288.7	3297.2	3328.0	3328.0	3350.2	3329.7	3309.2	3263.0	3203.2	3182.6
37.5°	3437.5	3440.9	3475.1	3516.1	3567.4	3615.3	3629.0	3634.1	3615.3	3570.8	3540.1
40°	3582.8	3589.7	3644.4	3707.7	3782.9	3877.0	3933.4	3959.1	3964.2	3943.7	3877.0
42.5°	3728.2	3738.4	3794.9	3887.2	3991.6	4111.3	4210.5	4273.7	4309.6	4309.6	4270.3
45°	3897.5	3911.2	3972.7	4073.6	4195.1	4345.6	4482.4	4603.8	4661.9	4665.4	4627.7
47.5°	4097.6	4109.6	4181.4	4284.0	4408.8	4561.0	4733.8	4872.3	4980.0	4986.9	4956.1
50°	4355.8	4372.9	4432.8	4525.1	4653.4	4807.3	4980.0	5173.3	5286.2	5313.5	5281.0
52.5°	4697.9	4701.3	4750.9	4836.4	4961.2	5108.3	5291.3	5501.6	5650.4	5672.7	5619.6
55°	5169.9	5164.7	5197.2	5289.6	5383.6	5498.2	5688.0	5924.0	6089.9	6124.1	6069.4
57.5°	5811.2	5806.0	5833.4	5855.6	6031.8	6143.0	6329.4	6555.1	6715.9	6815.1	6721.0
60°	6804.8	6799.7	6844.1	6974.1	7105.8	7268.2	7449.5	7719.7	7945.5	7974.5	7882.2
62.5°	7524.8	7550.4	7647.9	7800.1	8066.9	8385.0	8716.8	9072.5	9535.9	9683.0	9638.6
65°	7273.4	7324.7	7459.8	7690.7	8046.4	8485.9	9005.8	9650.5	10271.3	10618.5	10608.2
66°	7047.6	7104.1	7270.0	7492.3	7868.5	8349.1	8916.9	9619.7	10314.1	10697.1	10721.1
67.5°	6637.2	6700.5	6862.9	7126.3	7492.3	8003.6	8614.2	9378.6	10163.6	10609.9	10673.2
70°	5838.5	5910.4	6028.4	6245.6	6606.4	7063.0	7706.1	8390.1	9212.7	9724.1	9801.0
72.5°	4880.8	4944.1	5075.8	5253.7	5549.5	5836.8	6341.3	6845.8	7434.1	8017.3	7960.9
75°	3504.2	3531.5	3610.2	3803.4	3962.5	4220.7	4626.0	5039.9	5441.8	5708.6	5746.2
77.5°	1821.3	1893.2	2004.3	2218.1	2390.8	2623.4	2886.8	3198.0	3492.2	3736.7	3670.0
80°	1192.0	1222.8	1322.0	1431.4	1558.0	1706.8	1882.9	1999.2	2036.8	2021.4	2036.8
82.5°	687.5	743.9	875.6	959.4	1053.5	1104.8	1245.0	1378.4	1453.6	1359.6	1325.4
85°	87.2	112.9	355.7	448.1	513.1	590.0	632.8	713.1	665.3	595.1	725.1
87.5°	18.8	17.1	23.9	51.3	53.0	44.5	83.8	88.9	54.7	27.4	34.2
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°	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7
2.5°	2023.1	2024.8	2028.3	2033.4	2036.8	2040.2	2043.7	2048.8	2052.2	2055.6	2062.5
5°	2014.6	2021.4	2028.3	2035.1	2043.7	2057.3	2065.9	2072.7	2079.6	2093.3	2098.4
7.5°	2009.5	2021.4	2031.7	2043.7	2057.3	2069.3	2084.7	2093.3	2103.5	2112.1	2122.3
10°	2006.0	2023.1	2033.4	2050.5	2065.9	2077.9	2095.0	2105.2	2117.2	2127.5	2132.6
12.5°	2012.9	2021.4	2031.7	2048.8	2067.6	2084.7	2103.5	2112.1	2122.3	2130.9	2132.6
15°	2041.9	2041.9	2043.7	2057.3	2076.2	2089.8	2105.2	2113.8	2118.9	2124.0	2124.0
17.5°	2095.0	2083.0	2074.4	2076.2	2088.1	2096.7	2105.2	2105.2	2101.8	2100.1	2096.7
20°	2156.5	2141.1	2124.0	2112.1	2108.6	2101.8	2096.7	2079.6	2065.9	2053.9	2045.4
22.5°	2245.5	2221.5	2197.6	2175.3	2154.8	2129.2	2100.1	2065.9	2033.4	2011.2	1997.5
25°	2354.9	2336.1	2307.0	2272.8	2247.2	2199.3	2161.7	2112.1	2071.0	2041.9	2018.0
27.5°	2510.5	2488.3	2460.9	2430.2	2392.5	2339.5	2293.3	2235.2	2185.6	2142.9	2112.1
30°	2703.8	2674.7	2654.2	2616.6	2590.9	2531.1	2484.9	2413.1	2317.3	2248.9	2206.1
32.5°	2902.2	2869.7	2852.6	2823.5	2794.4	2758.5	2688.4	2577.2	2454.1	2342.9	2269.4
35°	3167.2	3133.0	3102.3	3076.6	3033.9	2967.2	2905.6	2772.2	2602.9	2447.3	2324.1
37.5°	3500.7	3444.3	3367.3	3302.3	3227.1	3131.3	3037.3	2900.5	2707.2	2505.4	2341.2
40°	3856.4	3757.3	3647.8	3526.4	3396.4	3257.9	3150.1	3011.6	2794.4	2555.0	2329.3
42.5°	4227.6	4070.2	3918.0	3747.0	3565.7	3401.5	3261.3	3109.1	2859.4	2568.7	2281.4
45°	4595.2	4419.1	4188.2	3964.2	3735.0	3531.5	3374.2	3203.2	2919.3	2573.8	2218.1
47.5°	4899.7	4718.4	4455.0	4174.5	3902.6	3671.7	3487.0	3302.3	2999.6	2609.7	2202.7
50°	5221.2	5000.6	4708.1	4376.3	4068.5	3810.3	3613.6	3422.1	3112.5	2702.1	2252.3
52.5°	5571.8	5318.6	4976.6	4605.5	4268.6	3979.6	3765.8	3569.1	3256.2	2832.1	2346.4
55°	5999.3	5689.8	5318.6	4899.7	4538.8	4219.0	3983.0	3750.4	3427.2	2986.0	2464.4
57.5°	6652.6	6272.9	5855.6	5378.5	4978.3	4600.4	4318.2	4049.7	3692.3	3215.1	2625.1
60°	7834.3	7429.0	6886.9	6308.8	5838.5	5397.3	4983.5	4650.0	4210.5	3666.6	2980.8
62.5°	9527.4	8988.7	8265.3	7456.4	6840.7	6204.5	5737.6	5241.7	4696.1	4109.6	3399.8
65°	10468.0	9814.7	8846.7	7907.9	7116.0	6425.1	5831.7	5257.1	4651.7	4090.7	3497.3
66°	10584.3	9903.6	8898.0	7909.6	7078.4	6368.7	5744.5	5149.3	4530.3	3995.0	3456.3
67.5°	10536.4	9840.4	8804.0	7760.8	6916.0	6153.2	5508.5	4891.1	4273.7	3774.4	3319.5
70°	9751.4	9091.3	8073.7	7063.0	6261.0	5508.5	4892.8	4285.7	3719.6	3292.1	2956.9
72.5°	8097.7	7533.3	6649.2	5855.6	5226.3	4605.5	4083.9	3504.2	3025.3	2708.9	2510.5
75°	5845.4	5503.3	4697.9	4242.9	3690.6	3278.4	2772.2	2428.4	2084.7	1930.8	1896.6
77.5°	3692.3	3232.2	2720.9	2240.3	1841.9	1527.2	1188.6	1009.0	841.4	824.3	995.3
80°	1869.2	1682.8	1296.3	1032.9	868.8	702.9	555.8	420.7	294.2	354.0	424.1
82.5°	1224.5	1021.0	800.4	658.4	572.9	475.4	369.4	256.5	188.1	212.1	290.7
85°	661.8	564.4	454.9	359.1	290.7	259.9	174.4	123.1	121.4	130.0	165.9
87.5°	47.9	47.9	37.6	34.2	41.0	34.2	30.8	30.8	29.1	30.8	41.0
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°	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7	2043.7
2.5°	2065.9	2071.0	2072.7	2081.3	2086.4	2089.8	2093.3	2093.3	2095.0	2100.1	2101.8
5°	2105.2	2113.8	2124.0	2130.9	2134.3	2144.6	2148.0	2148.0	2151.4	2158.2	2163.4
7.5°	2129.2	2141.1	2151.4	2154.8	2161.7	2165.1	2170.2	2173.6	2173.6	2180.5	2183.9
10°	2137.7	2144.6	2154.8	2154.8	2161.7	2161.7	2166.8	2168.5	2168.5	2175.3	2180.5
12.5°	2137.7	2141.1	2149.7	2149.7	2154.8	2156.5	2163.4	2168.5	2170.2	2178.8	2185.6
15°	2127.5	2130.9	2137.7	2139.4	2151.4	2158.2	2173.6	2183.9	2183.9	2192.4	2195.9
17.5°	2098.4	2106.9	2120.6	2134.3	2156.5	2171.9	2190.7	2199.3	2192.4	2187.3	2182.2
20°	2050.5	2065.9	2098.4	2132.6	2171.9	2192.4	2202.7	2194.2	2170.2	2146.3	2130.9
22.5°	2002.6	2033.4	2088.1	2139.4	2183.9	2197.6	2192.4	2161.7	2122.3	2093.3	2072.7
25°	2024.8	2060.8	2113.8	2160.0	2189.0	2185.6	2165.1	2122.3	2079.6	2041.9	2007.7
27.5°	2117.2	2156.5	2185.6	2201.0	2197.6	2173.6	2141.1	2093.3	2041.9	1992.4	1944.5
30°	2204.4	2224.9	2231.8	2219.8	2192.4	2153.1	2112.1	2057.3	1988.9	1927.4	1872.6
32.5°	2243.8	2223.2	2190.7	2158.2	2113.8	2079.6	2023.1	1963.3	1877.8	1804.2	1749.5
35°	2243.8	2161.7	2079.6	2011.2	1944.5	1901.7	1836.7	1756.4	1677.7	1616.1	1573.4
37.5°	2194.2	2036.8	1901.7	1790.6	1706.8	1660.6	1563.1	1491.3	1424.6	1404.1	1376.7
40°	2103.5	1870.9	1676.0	1530.6	1424.6	1356.2	1258.7	1209.1	1183.4	1173.2	1168.1
42.5°	1982.1	1686.2	1426.3	1246.7	1132.1	1055.2	990.2	959.4	957.7	956.0	956.0
45°	1852.1	1487.9	1183.4	969.7	868.8	800.4	769.6	757.6	767.9	766.2	767.9
47.5°	1771.7	1337.4	961.1	733.7	656.7	612.2	596.9	602.0	610.5	607.1	607.1
50°	1761.5	1260.4	812.3	571.2	513.1	490.8	487.4	487.4	492.5	489.1	487.4
52.5°	1799.1	1248.4	735.4	490.8	444.6	425.8	422.4	420.7	419.0	408.7	400.2
55°	1864.1	1275.8	713.1	470.3	422.4	401.9	396.8	393.3	386.5	372.8	357.4
57.5°	1994.1	1361.3	733.7	480.6	429.3	412.2	407.0	407.0	393.3	371.1	348.9
60°	2307.0	1578.5	817.5	519.9	461.7	444.6	448.1	446.4	425.8	393.3	359.1
62.5°	2710.6	1862.4	926.9	574.6	502.8	499.4	516.5	513.1	478.8	429.3	379.7
65°	2897.0	1995.8	957.7	586.6	511.3	526.7	560.9	557.5	514.8	446.4	383.1
66°	2900.5	1995.8	944.0	576.3	499.4	518.2	552.4	550.7	507.9	439.5	376.2
67.5°	2830.3	1941.0	904.7	555.8	475.4	489.1	519.9	518.2	478.8	422.4	362.6
70°	2567.0	1737.5	803.8	519.9	442.9	436.1	446.4	439.5	413.9	374.5	333.5
72.5°	2199.3	1458.8	701.2	492.5	420.7	393.3	386.5	381.4	360.8	338.6	313.0
75°	1732.4	1154.4	615.7	472.0	400.2	364.3	352.3	345.5	331.8	316.4	295.9
77.5°	1068.9	826.0	537.0	444.6	384.8	348.9	340.3	330.1	309.5	290.7	275.3
80°	477.1	511.3	441.2	388.2	343.7	311.3	297.6	282.2	261.7	249.7	241.1
82.5°	318.1	330.1	319.8	290.7	259.9	234.3	213.8	213.8	210.4	200.1	196.7
85°	203.5	205.2	198.4	179.6	167.6	152.2	143.7	145.4	152.2	150.5	148.8
87.5°	46.2	46.2	54.7	51.3	59.9	63.3	68.4	73.5	83.8	83.8	88.9
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: P156651

CATALOG NUMBER: TLM-E05-LED-E1-T4-7050

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	2043.7	2043.7	2043.7	2043.7	2043.7
2.5°	2103.5	2106.9	2110.4	2105.2	2106.9
5°	2163.4	2161.7	2170.2	2165.1	2168.5
7.5°	2182.2	2183.9	2190.7	2190.7	2192.4
10°	2183.9	2187.3	2195.9	2201.0	2204.4
12.5°	2192.4	2199.3	2213.0	2216.4	2216.4
15°	2199.3	2202.7	2211.3	2214.7	2218.1
17.5°	2175.3	2168.5	2171.9	2173.6	2171.9
20°	2115.5	2108.6	2106.9	2100.1	2103.5
22.5°	2050.5	2031.7	2019.7	2006.0	2006.0
25°	1971.8	1942.8	1918.8	1894.9	1900.0
27.5°	1898.3	1860.7	1836.7	1821.3	1817.9
30°	1826.5	1787.1	1764.9	1746.1	1746.1
32.5°	1706.8	1679.4	1650.3	1638.3	1636.6
35°	1540.9	1523.8	1499.8	1494.7	1486.1
37.5°	1354.5	1349.3	1328.8	1327.1	1318.5
40°	1159.5	1162.9	1156.1	1152.7	1147.5
42.5°	964.5	981.6	978.2	976.5	973.1
45°	778.1	790.1	791.8	796.9	805.5
47.5°	612.2	615.7	619.1	617.4	619.1
50°	478.8	470.3	468.6	463.5	468.6
52.5°	386.5	372.8	366.0	359.1	355.7
55°	340.3	326.6	319.8	316.4	313.0
57.5°	328.4	314.7	304.4	297.6	295.9
60°	331.8	311.3	297.6	289.0	287.3
62.5°	340.3	313.0	294.2	285.6	283.9
65°	338.6	309.5	292.4	282.2	280.5
66°	333.5	306.1	289.0	280.5	278.8
67.5°	324.9	301.0	285.6	278.8	275.3
70°	309.5	294.2	282.2	273.6	270.2
72.5°	295.9	283.9	273.6	265.1	263.4
75°	280.5	270.2	259.9	253.1	251.4
77.5°	261.7	251.4	244.6	239.4	237.7
80°	230.9	224.0	217.2	210.4	210.4
82.5°	191.5	186.4	179.6	174.4	172.7
85°	147.1	147.1	141.9	136.8	135.1
87.5°	87.2	85.5	85.5	80.4	80.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)