

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: P156649

Luminaire Tested: **TLM-E05-LED-E1-T4-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P156649  
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-T4-7030  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4  
Light Source: (105) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

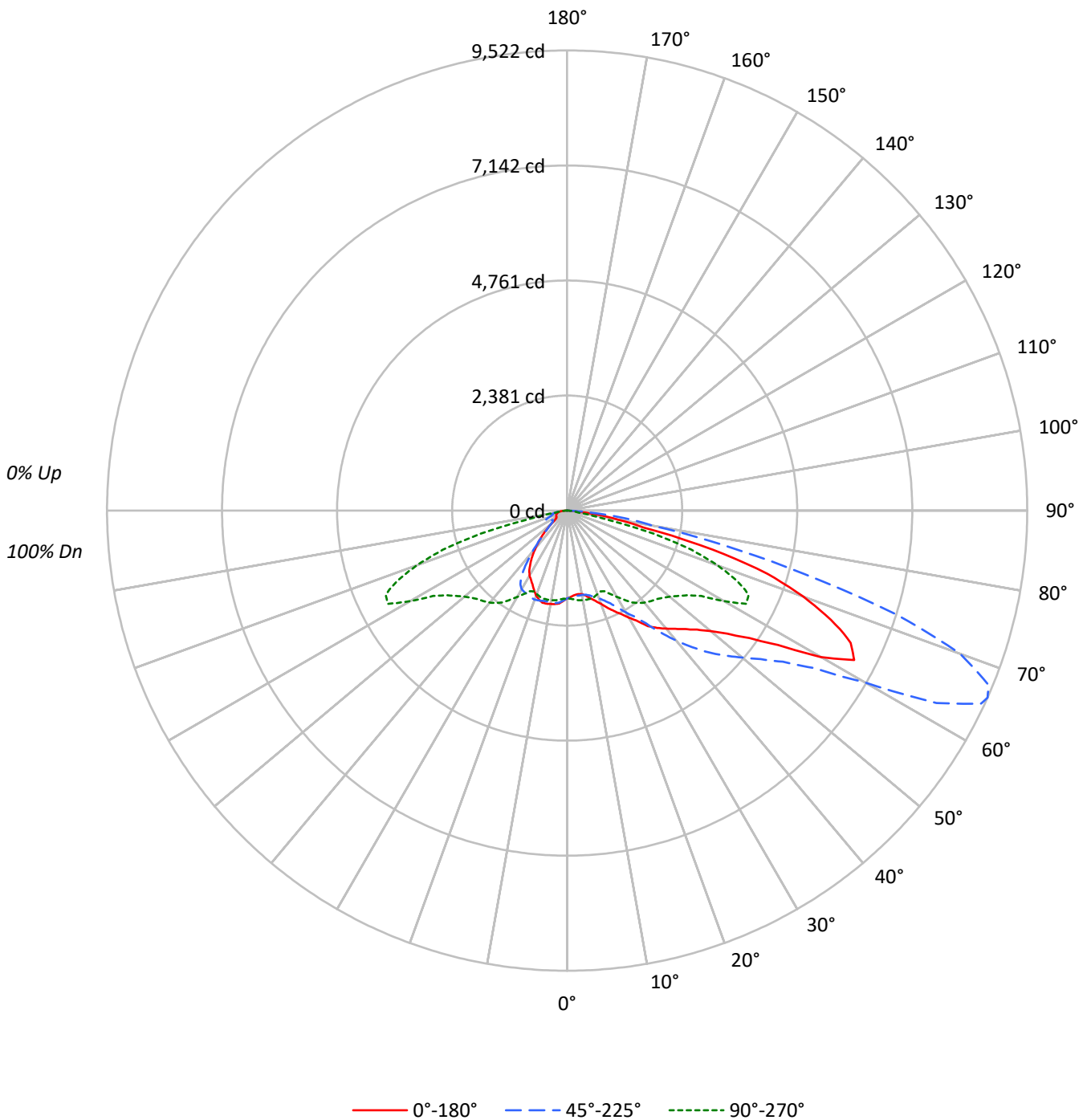
Lumens per Lamp: N/A  
Luminaire Lumens: 13800.9 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64  
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 127.3  
Input Voltage (V): NR  
Input Current (Ain): 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°	23591	23591	23591
5°	22829	24098	25128
10°	23093	24816	25839
15°	25301	25323	26508
20°	28361	25378	25841
25°	32825	26378	24200
30°	38297	30887	23274
35°	46200	36680	20942
40°	53989	42110	17292
45°	63626	47657	13150
50°	78225	55896	8415
55°	104047	68974	6299
60°	157101	97207	6632
65°	198666	127056	7659
70°	197058	125541	9119
75°	156288	92978	11214
80°	79239	19552	13981
85°	11547	16085	17900



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.6	1.3
10°-20°	536.3	3.9
20°-30°	923.8	6.7
30°-40°	1397.6	10.1
40°-50°	1811.5	13.1
50°-60°	2497.5	18.1
60°-70°	3880.3	28.1
70°-80°	2256.4	16.3
80°-90°	320.9	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°	1636.7	11.9
0°-40°	3034.4	22.0
0°-60°	7343.4	53.2
0°-90°	13800.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13800.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1819	1819	1819	1819	1819	
5°	1754	1780	1851	1912	1930	168
15°	1884	1819	1886	1935	1974	540
25°	2294	2120	1843	1927	1691	1070
35°	2918	2851	2317	1635	1323	1824
45°	3469	4153	2598	685	717	2712
55°	4602	5451	3051	353	279	4262
65°	6474	9452	4140	499	250	6127
75°	3119	5081	1856	314	224	3212
85°	78	530	108	128	120	336
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°	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1
2.5°	1785.6	1791.7	1787.1	1788.6	1788.6	1790.2	1790.2	1791.7	1790.2	1794.7	1797.8
5°	1753.6	1756.7	1755.2	1758.2	1761.2	1767.3	1765.8	1773.4	1774.9	1779.5	1787.1
7.5°	1741.5	1738.4	1739.9	1744.5	1747.5	1750.6	1753.6	1759.7	1764.3	1774.9	1781.0
10°	1753.6	1752.1	1753.6	1756.7	1756.7	1758.2	1755.2	1761.2	1764.3	1773.4	1779.5
12.5°	1803.9	1803.9	1800.8	1800.8	1797.8	1794.7	1787.1	1782.6	1781.0	1782.6	1785.6
15°	1884.5	1881.5	1875.4	1870.8	1864.8	1854.1	1843.4	1834.3	1828.2	1819.1	1816.0
17.5°	1963.7	1959.1	1953.0	1947.0	1939.3	1928.7	1911.9	1901.3	1884.5	1873.9	1867.8
20°	2055.0	2045.9	2038.3	2030.7	2015.5	2012.4	1995.7	1977.4	1957.6	1933.3	1930.2
22.5°	2173.8	2158.6	2149.4	2144.9	2129.6	2125.1	2097.7	2071.8	2047.4	2015.5	2007.8
25°	2294.0	2278.8	2274.2	2268.2	2257.5	2251.4	2225.5	2196.6	2164.6	2120.5	2111.4
27.5°	2411.2	2412.8	2400.6	2405.2	2402.1	2391.5	2365.6	2336.7	2312.3	2260.5	2249.9
30°	2557.4	2548.2	2542.2	2551.3	2540.6	2542.2	2519.3	2504.1	2464.5	2434.1	2412.8
32.5°	2709.6	2708.1	2717.2	2723.3	2721.8	2718.7	2700.5	2685.2	2650.2	2606.1	2597.0
35°	2918.2	2927.3	2934.9	2962.3	2962.3	2982.1	2963.8	2945.6	2904.5	2851.2	2832.9
37.5°	3059.7	3062.8	3093.2	3129.7	3175.4	3218.0	3230.2	3234.8	3218.0	3178.5	3151.1
40°	3189.1	3195.2	3243.9	3300.2	3367.2	3450.9	3501.2	3524.0	3528.6	3510.3	3450.9
42.5°	3318.5	3327.6	3377.9	3460.1	3552.9	3659.5	3747.8	3804.1	3836.1	3836.1	3801.1
45°	3469.2	3481.4	3536.2	3626.0	3734.1	3868.0	3989.8	4097.9	4149.7	4152.7	4119.2
47.5°	3647.3	3658.0	3721.9	3813.2	3924.4	4059.8	4213.6	4336.9	4432.8	4438.9	4411.5
50°	3877.2	3892.4	3945.7	4027.9	4142.0	4279.0	4432.8	4604.8	4705.3	4729.6	4700.7
52.5°	4181.6	4184.7	4228.8	4304.9	4416.0	4547.0	4709.8	4897.1	5029.5	5049.3	5002.1
55°	4601.8	4597.2	4626.1	4708.3	4792.0	4894.0	5063.0	5273.1	5420.7	5451.2	5402.5
57.5°	5172.6	5168.0	5192.4	5212.2	5369.0	5467.9	5633.8	5834.8	5977.9	6066.2	5982.4
60°	6057.0	6052.5	6092.0	6207.7	6325.0	6469.6	6630.9	6871.4	7072.4	7098.3	7016.1
62.5°	6697.9	6720.7	6807.5	6943.0	7180.5	7463.6	7758.9	8075.5	8488.1	8619.0	8579.4
65°	6474.1	6519.8	6640.1	6845.6	7162.2	7553.4	8016.2	8590.1	9142.6	9451.7	9442.5
66°	6273.2	6323.4	6471.1	6669.0	7003.9	7431.6	7937.0	8562.7	9180.7	9521.7	9543.0
67.5°	5907.9	5964.2	6108.8	6343.2	6669.0	7124.1	7667.6	8348.0	9046.7	9444.0	9500.4
70°	5197.0	5260.9	5365.9	5559.3	5880.5	6286.9	6859.3	7468.2	8200.4	8655.5	8724.0
72.5°	4344.5	4400.8	4518.0	4676.4	4939.7	5195.4	5644.5	6093.6	6617.2	7136.3	7086.1
75°	3119.1	3143.4	3213.5	3385.5	3527.1	3756.9	4117.7	4486.1	4843.8	5081.3	5114.8
77.5°	1621.2	1685.1	1784.1	1974.4	2128.1	2335.1	2569.6	2846.6	3108.4	3326.1	3266.7
80°	1061.0	1088.4	1176.7	1274.1	1386.8	1519.2	1676.0	1779.5	1813.0	1799.3	1813.0
82.5°	611.9	662.2	779.4	854.0	937.7	983.4	1108.2	1226.9	1293.9	1210.2	1179.7
85°	77.6	100.5	316.6	398.8	456.7	525.2	563.2	634.8	592.2	529.7	645.4
87.5°	16.7	15.2	21.3	45.7	47.2	39.6	74.6	79.2	48.7	24.4	30.4
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°	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1
2.5°	1800.8	1802.3	1805.4	1810.0	1813.0	1816.0	1819.1	1823.7	1826.7	1829.7	1835.8
5°	1793.2	1799.3	1805.4	1811.5	1819.1	1831.3	1838.9	1845.0	1851.1	1863.2	1867.8
7.5°	1788.6	1799.3	1808.4	1819.1	1831.3	1841.9	1855.6	1863.2	1872.4	1880.0	1889.1
10°	1785.6	1800.8	1810.0	1825.2	1838.9	1849.5	1864.8	1873.9	1884.5	1893.7	1898.2
12.5°	1791.7	1799.3	1808.4	1823.7	1840.4	1855.6	1872.4	1880.0	1889.1	1896.7	1898.2
15°	1817.6	1817.6	1819.1	1831.3	1848.0	1860.2	1873.9	1881.5	1886.1	1890.6	1890.6
17.5°	1864.8	1854.1	1846.5	1848.0	1858.7	1866.3	1873.9	1873.9	1870.8	1869.3	1866.3
20°	1919.6	1905.9	1890.6	1880.0	1876.9	1870.8	1866.3	1851.1	1838.9	1828.2	1820.6
22.5°	1998.7	1977.4	1956.1	1936.3	1918.0	1895.2	1869.3	1838.9	1810.0	1790.2	1778.0
25°	2096.1	2079.4	2053.5	2023.1	2000.2	1957.6	1924.1	1880.0	1843.4	1817.6	1796.3
27.5°	2234.7	2214.9	2190.5	2163.1	2129.6	2082.4	2041.3	1989.6	1945.4	1907.4	1880.0
30°	2406.7	2380.8	2362.5	2329.0	2306.2	2252.9	2211.8	2147.9	2062.6	2001.8	1963.7
32.5°	2583.3	2554.3	2539.1	2513.2	2487.4	2455.4	2393.0	2294.0	2184.4	2085.5	2020.0
35°	2819.2	2788.8	2761.4	2738.5	2700.5	2641.1	2586.3	2467.6	2316.9	2178.3	2068.7
37.5°	3116.0	3065.8	2997.3	2939.5	2872.5	2787.2	2703.5	2581.7	2409.7	2230.1	2084.0
40°	3432.7	3344.4	3247.0	3138.9	3023.2	2899.9	2804.0	2680.7	2487.4	2274.2	2073.3
42.5°	3763.0	3623.0	3487.5	3335.3	3173.9	3027.8	2902.9	2767.5	2545.2	2286.4	2030.7
45°	4090.3	3933.5	3728.0	3528.6	3324.6	3143.4	3003.4	2851.2	2598.5	2291.0	1974.4
47.5°	4361.2	4199.9	3965.5	3715.8	3473.8	3268.3	3103.9	2939.5	2670.0	2323.0	1960.7
50°	4647.4	4451.1	4190.8	3895.4	3621.4	3391.6	3216.5	3046.0	2770.5	2405.2	2004.8
52.5°	4959.5	4734.2	4429.7	4099.4	3799.5	3542.3	3352.0	3176.9	2898.4	2520.8	2088.5
55°	5340.1	5064.5	4734.2	4361.2	4040.1	3755.4	3545.3	3338.3	3050.6	2657.8	2193.6
57.5°	5921.6	5583.6	5212.2	4787.5	4431.3	4094.9	3843.7	3604.7	3286.5	2861.8	2336.7
60°	6973.4	6612.7	6130.1	5615.6	5197.0	4804.2	4435.8	4139.0	3747.8	3263.7	2653.3
62.5°	8480.5	8000.9	7357.0	6637.0	6089.0	5522.7	5107.2	4665.7	4180.1	3658.0	3026.2
65°	9317.7	8736.2	7874.6	7038.9	6334.1	5719.1	5190.9	4679.4	4140.5	3641.2	3113.0
66°	9421.2	8815.4	7920.3	7040.4	6300.6	5668.9	5113.2	4583.5	4032.4	3556.0	3076.5
67.5°	9378.6	8759.0	7836.5	6908.0	6156.0	5477.1	4903.2	4353.6	3804.1	3359.6	2954.7
70°	8679.9	8092.3	7186.5	6286.9	5573.0	4903.2	4355.2	3814.8	3310.9	2930.3	2632.0
72.5°	7207.9	6705.5	5918.5	5212.2	4652.0	4099.4	3635.1	3119.1	2692.9	2411.2	2234.7
75°	5203.1	4898.6	4181.6	3776.7	3285.0	2918.2	2467.6	2161.6	1855.6	1718.6	1688.2
77.5°	3286.5	2877.1	2421.9	1994.1	1639.5	1359.4	1058.0	898.1	748.9	733.7	885.9
80°	1663.8	1497.9	1153.9	919.4	773.3	625.6	494.7	374.5	261.8	315.1	377.5
82.5°	1089.9	908.8	712.4	586.1	510.0	423.2	328.8	228.3	167.4	188.8	258.8
85°	589.1	502.3	404.9	319.7	258.8	231.4	155.3	109.6	108.1	115.7	147.7
87.5°	42.6	42.6	33.5	30.4	36.5	30.4	27.4	27.4	25.9	27.4	36.5
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°	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1	1819.1
2.5°	1838.9	1843.4	1845.0	1852.6	1857.1	1860.2	1863.2	1863.2	1864.8	1869.3	1870.8
5°	1873.9	1881.5	1890.6	1896.7	1899.8	1908.9	1911.9	1911.9	1915.0	1921.1	1925.6
7.5°	1895.2	1905.9	1915.0	1918.0	1924.1	1927.2	1931.7	1934.8	1934.8	1940.9	1943.9
10°	1902.8	1908.9	1918.0	1918.0	1924.1	1924.1	1928.7	1930.2	1930.2	1936.3	1940.9
12.5°	1902.8	1905.9	1913.5	1913.5	1918.0	1919.6	1925.6	1930.2	1931.7	1939.3	1945.4
15°	1893.7	1896.7	1902.8	1904.3	1915.0	1921.1	1934.8	1943.9	1943.9	1951.5	1954.6
17.5°	1867.8	1875.4	1887.6	1899.8	1919.6	1933.3	1950.0	1957.6	1951.5	1947.0	1942.4
20°	1825.2	1838.9	1867.8	1898.2	1933.3	1951.5	1960.7	1953.0	1931.7	1910.4	1896.7
22.5°	1782.6	1810.0	1858.7	1904.3	1943.9	1956.1	1951.5	1924.1	1889.1	1863.2	1845.0
25°	1802.3	1834.3	1881.5	1922.6	1948.5	1945.4	1927.2	1889.1	1851.1	1817.6	1787.1
27.5°	1884.5	1919.6	1945.4	1959.1	1956.1	1934.8	1905.9	1863.2	1817.6	1773.4	1730.8
30°	1962.2	1980.4	1986.5	1975.9	1951.5	1916.5	1880.0	1831.3	1770.4	1715.6	1666.9
32.5°	1997.2	1978.9	1950.0	1921.1	1881.5	1851.1	1800.8	1747.5	1671.4	1606.0	1557.3
35°	1997.2	1924.1	1851.1	1790.2	1730.8	1692.7	1634.9	1563.4	1493.3	1438.5	1400.5
37.5°	1953.0	1813.0	1692.7	1593.8	1519.2	1478.1	1391.3	1327.4	1268.0	1249.8	1225.4
40°	1872.4	1665.3	1491.8	1362.4	1268.0	1207.1	1120.4	1076.2	1053.4	1044.3	1039.7
42.5°	1764.3	1500.9	1269.6	1109.7	1007.7	939.2	881.4	854.0	852.5	850.9	850.9
45°	1648.6	1324.4	1053.4	863.1	773.3	712.4	685.0	674.4	683.5	682.0	683.5
47.5°	1577.1	1190.4	855.5	653.0	584.5	545.0	531.3	535.8	543.4	540.4	540.4
50°	1567.9	1121.9	723.1	508.4	456.7	436.9	433.8	433.8	438.4	435.4	433.8
52.5°	1601.4	1111.2	654.6	436.9	395.8	379.0	376.0	374.5	373.0	363.8	356.2
55°	1659.3	1135.6	634.8	418.6	376.0	357.7	353.2	350.1	344.0	331.9	318.2
57.5°	1774.9	1211.7	653.0	427.8	382.1	366.9	362.3	362.3	350.1	330.3	310.5
60°	2053.5	1405.0	727.6	462.8	411.0	395.8	398.8	397.3	379.0	350.1	319.7
62.5°	2412.8	1657.7	825.1	511.5	447.5	444.5	459.7	456.7	426.2	382.1	337.9
65°	2578.7	1776.5	852.5	522.1	455.2	468.9	499.3	496.3	458.2	397.3	341.0
66°	2581.7	1776.5	840.3	513.0	444.5	461.2	491.7	490.2	452.1	391.2	334.9
67.5°	2519.3	1727.8	805.3	494.7	423.2	435.4	462.8	461.2	426.2	376.0	322.7
70°	2284.9	1546.6	715.5	462.8	394.3	388.2	397.3	391.2	368.4	333.4	296.8
72.5°	1957.6	1298.5	624.1	438.4	374.5	350.1	344.0	339.5	321.2	301.4	278.6
75°	1542.0	1027.5	548.0	420.1	356.2	324.2	313.6	307.5	295.3	281.6	263.3
77.5°	951.4	735.2	478.0	395.8	342.5	310.5	302.9	293.8	275.5	258.8	245.1
80°	424.7	455.2	392.7	345.6	306.0	277.0	264.9	251.2	232.9	222.2	214.6
82.5°	283.1	293.8	284.7	258.8	231.4	208.5	190.3	190.3	187.2	178.1	175.1
85°	181.1	182.7	176.6	159.8	149.2	135.5	127.9	129.4	135.5	134.0	132.4
87.5°	41.1	41.1	48.7	45.7	53.3	56.3	60.9	65.5	74.6	74.6	79.2
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: P156649

CATALOG NUMBER: TLM-E05-LED-E1-T4-7030

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	1819.1	1819.1	1819.1	1819.1	1819.1
2.5°	1872.4	1875.4	1878.5	1873.9	1875.4
5°	1925.6	1924.1	1931.7	1927.2	1930.2
7.5°	1942.4	1943.9	1950.0	1950.0	1951.5
10°	1943.9	1947.0	1954.6	1959.1	1962.2
12.5°	1951.5	1957.6	1969.8	1972.8	1972.8
15°	1957.6	1960.7	1968.3	1971.3	1974.4
17.5°	1936.3	1930.2	1933.3	1934.8	1933.3
20°	1883.0	1876.9	1875.4	1869.3	1872.4
22.5°	1825.2	1808.4	1797.8	1785.6	1785.6
25°	1755.2	1729.3	1708.0	1686.7	1691.2
27.5°	1689.7	1656.2	1634.9	1621.2	1618.2
30°	1625.8	1590.8	1571.0	1554.2	1554.2
32.5°	1519.2	1494.9	1469.0	1458.3	1456.8
35°	1371.5	1356.3	1335.0	1330.4	1322.8
37.5°	1205.6	1201.1	1182.8	1181.3	1173.7
40°	1032.1	1035.1	1029.0	1026.0	1021.4
42.5°	858.5	873.8	870.7	869.2	866.2
45°	692.6	703.3	704.8	709.4	717.0
47.5°	545.0	548.0	551.1	549.5	551.1
50°	426.2	418.6	417.1	412.5	417.1
52.5°	344.0	331.9	325.8	319.7	316.6
55°	302.9	290.7	284.7	281.6	278.6
57.5°	292.3	280.1	271.0	264.9	263.3
60°	295.3	277.0	264.9	257.3	255.7
62.5°	302.9	278.6	261.8	254.2	252.7
65°	301.4	275.5	260.3	251.2	249.6
66°	296.8	272.5	257.3	249.6	248.1
67.5°	289.2	267.9	254.2	248.1	245.1
70°	275.5	261.8	251.2	243.6	240.5
72.5°	263.3	252.7	243.6	235.9	234.4
75°	249.6	240.5	231.4	225.3	223.8
77.5°	232.9	223.8	217.7	213.1	211.6
80°	205.5	199.4	193.3	187.2	187.2
82.5°	170.5	165.9	159.8	155.3	153.7
85°	130.9	130.9	126.3	121.8	120.3
87.5°	77.6	76.1	76.1	71.5	71.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)