

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: P151810

Luminaire Tested: **TLM-E04-LED-E1-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P151810
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-E04-LED-E1-SL4-HSS
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8139.2 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 4.24 / 0.98 / 4.1
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

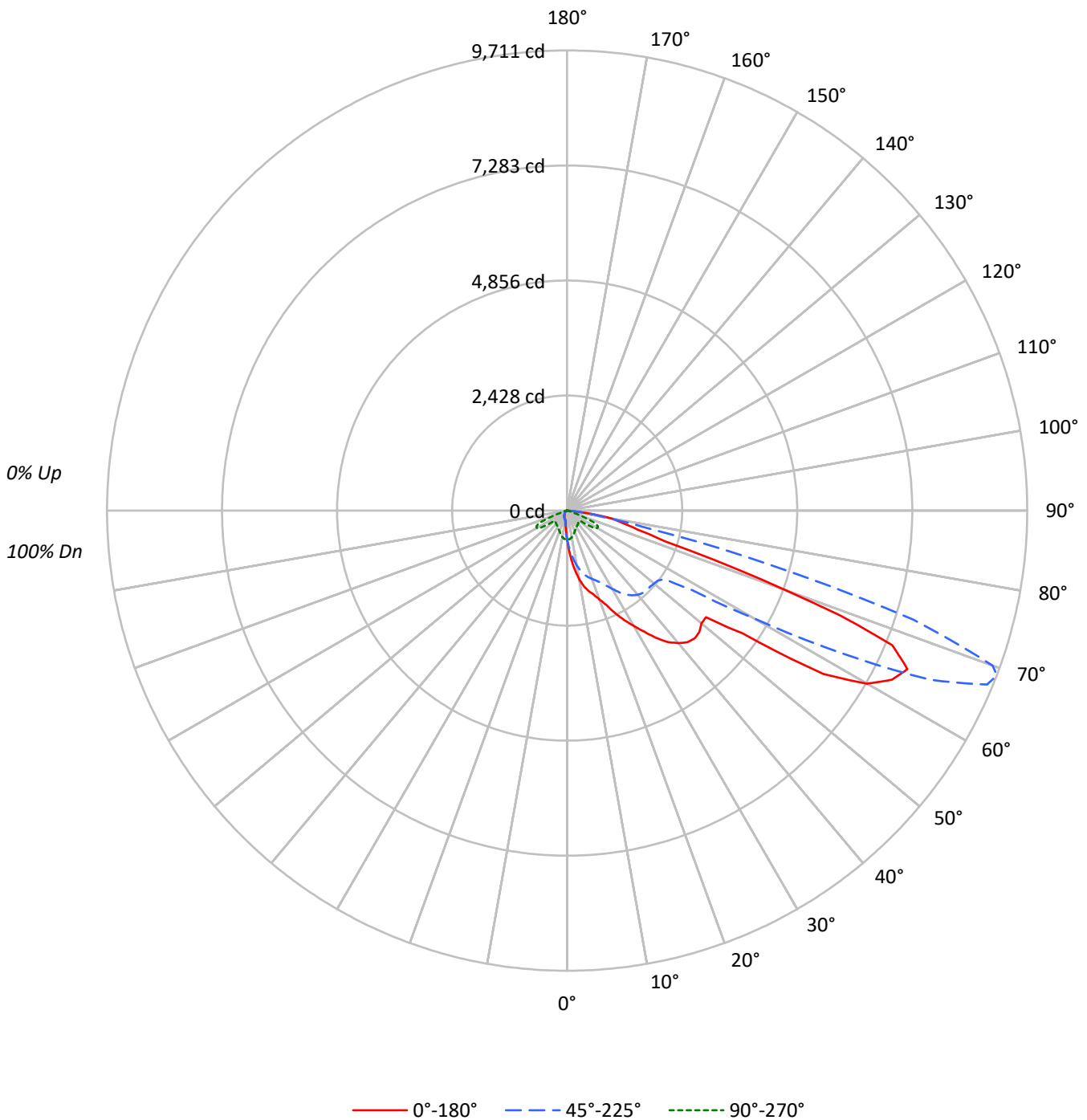
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	86	92	87	83	88	84	81	84	81	78	76				
2	91	80	71	63	88	78	70	62	74	67	61	71	65	59	68	62	58	55				
3	80	66	55	47	77	64	54	46	61	52	45	58	51	44	55	49	43	41				
4	71	56	44	36	68	54	44	35	51	42	35	49	41	34	46	39	33	31				
5	64	48	36	28	61	46	36	28	44	35	27	42	33	27	40	32	27	24				
6	58	42	31	23	56	40	30	22	38	29	22	37	28	22	35	27	22	19				
7	53	37	26	19	51	36	26	19	34	25	18	32	24	18	31	24	18	16				
8	49	33	23	16	47	32	22	16	31	22	16	29	21	15	28	21	15	13				
9	45	30	20	14	44	29	20	14	28	19	13	27	19	13	25	18	13	11				
10	42	27	18	12	41	27	18	12	25	17	12	24	17	12	23	17	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9875	9875	9875
5°	16880	9741	5182
10°	24035	9310	3328
15°	29228	8561	3015
20°	34103	7979	2735
25°	42212	7635	2411
30°	52091	7470	2054
35°	64382	7400	1726
40°	76590	7523	1594
45°	86580	7845	1636
50°	92509	8630	1500
55°	126415	14937	896
60°	234727	23690	643
65°	301176	25595	608
70°	227408	10583	690
75°	94679	4053	826
80°	86476	3821	1110
85°	7613	3447	1972



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.2	0.8
10°-20°	217.8	2.7
20°-30°	416.9	5.1
30°-40°	693.3	8.5
40°-50°	938.2	11.5
50°-60°	1467.2	18.0
60°-70°	3016.5	37.1
70°-80°	1213.8	14.9
80°-90°	112.3	1.4
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°	697.9	8.6
0°-40°	1391.2	17.1
0°-60°	3796.6	46.6
0°-90°	8139.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8139.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	615	615	615	615	615	
5°	1047	891	604	384	321	113
15°	1757	1393	515	191	181	502
25°	2381	1677	431	152	136	1115
35°	3283	2165	377	108	88	2059
45°	3811	2371	345	71	72	2913
55°	4513	2520	533	47	32	4551
65°	7923	8448	673	23	16	7258
75°	1525	4448	65	9	13	2045
85°	41	179	19	7	11	256
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°	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7
2.5°	820.0	810.7	800.0	800.0	786.7	786.7	778.7	757.3	754.7	742.7	730.7
5°	1046.7	1038.7	1025.3	1013.3	1002.7	984.0	970.7	945.3	917.3	890.7	866.7
7.5°	1268.0	1264.0	1240.0	1236.0	1218.7	1188.0	1161.3	1124.0	1076.0	1038.7	994.7
10°	1473.3	1464.0	1458.7	1436.0	1410.7	1377.3	1336.0	1290.7	1234.7	1176.0	1113.3
12.5°	1636.0	1630.7	1606.7	1597.3	1570.7	1537.3	1485.3	1426.7	1370.7	1294.7	1221.3
15°	1757.3	1748.0	1732.0	1717.3	1685.3	1656.0	1608.0	1544.0	1476.0	1393.3	1305.3
17.5°	1858.7	1841.3	1837.3	1814.7	1781.3	1746.7	1693.3	1634.7	1554.7	1472.0	1376.0
20°	1994.7	1970.7	1962.7	1929.3	1890.7	1842.7	1781.3	1708.0	1624.0	1533.3	1434.7
22.5°	2154.7	2137.3	2120.0	2090.7	2041.3	1973.3	1884.0	1804.0	1697.3	1597.3	1490.7
25°	2381.3	2366.7	2338.7	2298.7	2237.3	2156.0	2048.0	1930.7	1805.3	1677.3	1552.0
27.5°	2601.3	2588.0	2568.0	2537.3	2468.0	2378.7	2245.3	2096.0	1937.3	1782.7	1644.0
30°	2808.0	2796.0	2776.0	2745.3	2684.0	2596.0	2445.3	2285.3	2088.0	1908.0	1741.3
32.5°	3030.7	3026.7	3004.0	2960.0	2906.7	2788.0	2624.0	2452.0	2252.0	2044.0	1849.3
35°	3282.7	3252.0	3230.7	3186.7	3096.0	2969.3	2777.3	2589.3	2378.7	2165.3	1948.0
37.5°	3496.0	3466.7	3440.0	3384.0	3273.3	3112.0	2894.7	2688.0	2470.7	2253.3	2032.0
40°	3652.0	3637.3	3605.3	3532.0	3408.0	3216.0	2981.3	2756.0	2537.3	2318.7	2100.0
42.5°	3768.0	3745.3	3709.3	3633.3	3486.7	3268.0	3016.0	2784.0	2568.0	2358.7	2144.0
45°	3810.7	3792.0	3758.7	3676.0	3517.3	3282.7	3014.7	2776.0	2569.3	2370.7	2173.3
47.5°	3785.3	3766.7	3737.3	3660.0	3504.0	3265.3	2990.7	2753.3	2556.0	2374.7	2200.0
50°	3701.3	3690.7	3668.0	3602.7	3462.7	3232.0	2969.3	2741.3	2553.3	2394.7	2237.3
52.5°	3693.3	3686.7	3658.7	3593.3	3450.7	3221.3	2966.7	2748.0	2576.0	2420.0	2264.0
55°	4513.3	4418.7	4206.7	4026.7	3730.7	3378.7	3101.3	2856.0	2672.0	2520.0	2410.7
57.5°	6414.7	6273.3	5994.7	5652.0	4972.0	4304.0	3769.3	3382.7	3192.0	3122.7	3164.0
60°	7305.3	7280.0	7236.0	7073.3	6725.3	6150.7	5510.7	4818.7	4541.3	4517.3	4601.3
62.5°	7728.0	7712.0	7725.3	7705.3	7597.3	7429.3	7245.3	6946.7	6672.0	6494.7	6118.7
65°	7922.7	7933.3	8009.3	8069.3	8082.7	8126.7	8261.3	8633.3	8905.3	8448.0	7404.0
67.5°	7428.0	7490.7	7665.3	7884.0	8140.0	8388.0	8788.0	9572.0	10130.7	9593.3	8110.7
69°	6149.3	6180.0	6606.7	7018.7	7644.0	8081.3	8661.3	9689.3	10317.3	9710.7	8054.7
70°	4841.3	4869.3	5326.7	5886.7	6944.0	7506.7	8265.3	9490.7	10142.7	9554.7	7766.7
72.5°	2184.0	2144.0	2305.3	2605.3	3754.7	4648.0	5974.7	7689.3	8368.0	7654.7	5810.7
75°	1525.3	1508.0	1525.3	1526.7	1705.3	2200.0	2776.0	4168.0	5154.7	4448.0	2776.0
77.5°	1181.3	1169.3	1157.3	1144.0	1165.3	1305.3	1361.3	1478.7	1920.0	1816.0	1058.7
80°	934.7	924.0	953.3	944.0	944.0	960.0	949.3	905.3	822.7	762.7	682.7
82.5°	434.7	437.3	437.3	474.7	572.0	668.0	698.7	654.7	581.3	494.7	398.7
85°	41.3	46.7	78.7	121.3	241.3	272.0	273.3	226.7	226.7	178.7	144.0
87.5°	0.0	1.3	1.3	1.3	12.0	33.3	28.0	8.0	4.0	4.0	6.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7
2.5°	709.3	705.3	689.3	673.3	658.7	642.7	628.0	613.3	597.3	585.3	570.7
5°	829.3	800.0	766.7	734.7	702.7	669.3	634.7	604.0	572.0	542.7	514.7
7.5°	950.7	893.3	848.0	790.7	738.7	686.7	638.7	589.3	544.0	501.3	461.3
10°	1053.3	984.0	913.3	840.0	765.3	696.0	629.3	570.7	510.7	458.7	409.3
12.5°	1137.3	1049.3	962.7	870.7	786.7	698.7	616.0	545.3	474.7	416.0	365.3
15°	1213.3	1112.0	1008.0	901.3	794.7	694.7	602.7	514.7	442.7	376.0	318.7
17.5°	1274.7	1158.7	1041.3	921.3	806.7	689.3	585.3	493.3	409.3	340.0	284.0
20°	1328.0	1206.7	1080.0	945.3	814.7	688.0	570.7	466.7	380.0	306.7	252.0
22.5°	1377.3	1256.0	1120.0	976.0	826.7	686.7	557.3	446.7	354.7	281.3	226.7
25°	1433.3	1305.3	1162.7	1008.0	848.0	692.0	549.3	430.7	332.0	257.3	206.7
27.5°	1496.0	1361.3	1213.3	1048.0	876.0	702.7	546.7	413.3	312.0	234.7	190.7
30°	1584.0	1428.0	1264.0	1088.0	901.3	714.7	544.0	402.7	292.0	217.3	174.7
32.5°	1661.3	1493.3	1320.0	1129.3	929.3	726.7	542.7	388.0	273.3	200.0	162.7
35°	1742.7	1553.3	1368.0	1169.3	953.3	740.0	541.3	377.3	256.0	182.7	150.7
37.5°	1813.3	1604.0	1405.3	1204.0	980.0	752.0	542.7	368.0	240.0	168.0	140.0
40°	1873.3	1656.0	1446.7	1236.0	1008.0	770.7	544.0	358.7	224.0	154.7	130.7
42.5°	1926.7	1705.3	1490.7	1272.0	1040.0	792.0	552.0	350.7	210.7	142.7	121.3
45°	1968.0	1750.7	1538.7	1322.7	1092.0	826.7	566.7	345.3	197.3	132.0	113.3
47.5°	2010.7	1817.3	1620.0	1402.7	1168.0	881.3	592.0	344.0	186.7	124.0	106.7
50°	2069.3	1884.0	1692.0	1484.0	1237.3	937.3	622.7	345.3	173.3	116.0	100.0
52.5°	2112.0	1952.0	1785.3	1625.3	1402.7	1108.0	741.3	369.3	166.7	109.3	92.0
55°	2364.0	2336.0	2340.0	2366.7	2194.7	1885.3	1240.0	533.3	196.0	124.0	90.7
57.5°	3333.3	3432.0	3489.3	3488.0	3204.0	2657.3	1665.3	685.3	218.7	144.0	108.0
60°	4608.0	4533.3	4428.0	4168.0	3790.7	3033.3	1862.7	737.3	189.3	114.7	98.7
62.5°	5734.7	5297.3	4909.3	4488.0	3993.3	3164.0	1902.7	733.3	165.3	86.7	69.3
65°	6437.3	5650.7	5024.0	4496.0	3913.3	3054.7	1800.0	673.3	140.0	70.7	57.3
67.5°	6605.3	5460.0	4573.3	3900.0	3269.3	2377.3	1321.3	506.7	109.3	58.7	50.7
69°	6238.7	4853.3	3789.3	3025.3	2378.7	1577.3	817.3	320.0	84.0	53.3	46.7
70°	5738.7	4221.3	3086.7	2428.0	1761.3	1108.0	572.0	225.3	68.0	49.3	42.7
72.5°	3692.0	2217.3	1517.3	1056.0	726.7	441.3	224.0	101.3	52.0	41.3	34.7
75°	1432.0	820.0	594.7	452.0	353.3	245.3	136.0	65.3	44.0	34.7	26.7
77.5°	705.3	540.0	441.3	302.7	176.0	109.3	73.3	50.7	36.0	25.3	17.3
80°	557.3	370.7	221.3	137.3	104.0	78.7	56.0	41.3	26.7	16.0	12.0
82.5°	285.3	156.0	114.7	93.3	77.3	61.3	45.3	29.3	17.3	10.7	9.3
85°	89.3	65.3	58.7	57.3	53.3	44.0	32.0	18.7	10.7	6.7	6.7
87.5°	6.7	9.3	12.0	9.3	10.7	9.3	12.0	8.0	5.3	5.3	4.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7	614.7
2.5°	560.0	544.0	529.3	520.0	502.7	496.0	489.3	486.7	474.7	477.3	466.7
5°	489.3	461.3	440.0	418.7	398.7	384.0	372.0	357.3	345.3	340.0	329.3
7.5°	425.3	389.3	361.3	338.7	314.7	296.0	280.0	269.3	258.7	248.0	242.7
10°	369.3	330.7	298.7	276.0	253.3	237.3	225.3	217.3	210.7	206.7	205.3
12.5°	317.3	280.0	250.7	230.7	213.3	205.3	200.0	196.0	194.7	193.3	193.3
15°	277.3	240.0	217.3	202.7	194.7	190.7	189.3	186.7	184.0	182.7	182.7
17.5°	240.0	212.0	196.0	188.0	184.0	181.3	178.7	176.0	173.3	172.0	172.0
20°	214.7	192.0	184.0	178.7	174.7	172.0	168.0	165.3	164.0	162.7	161.3
22.5°	194.7	180.0	174.7	170.7	165.3	161.3	158.7	156.0	153.3	152.0	150.7
25°	180.0	170.7	166.7	161.3	156.0	152.0	148.0	144.0	141.3	140.0	137.3
27.5°	169.3	162.7	157.3	150.7	145.3	141.3	137.3	133.3	130.7	128.0	126.7
30°	160.0	153.3	146.7	141.3	134.7	130.7	125.3	121.3	120.0	117.3	114.7
32.5°	150.7	144.0	137.3	130.7	124.0	118.7	116.0	110.7	108.0	106.7	104.0
35°	140.0	133.3	125.3	120.0	113.3	108.0	104.0	100.0	97.3	94.7	93.3
37.5°	130.7	122.7	114.7	108.0	102.7	97.3	93.3	89.3	86.7	84.0	82.7
40°	120.0	112.0	104.0	97.3	92.0	88.0	84.0	80.0	77.3	76.0	76.0
42.5°	110.7	101.3	93.3	88.0	84.0	78.7	74.7	70.7	69.3	68.0	69.3
45°	101.3	92.0	85.3	80.0	76.0	70.7	66.7	64.0	62.7	64.0	65.3
47.5°	93.3	84.0	77.3	73.3	69.3	65.3	61.3	58.7	58.7	61.3	64.0
50°	85.3	76.0	70.7	68.0	64.0	60.0	54.7	53.3	54.7	57.3	60.0
52.5°	77.3	66.7	62.7	61.3	57.3	53.3	49.3	48.0	49.3	52.0	50.7
55°	69.3	58.7	57.3	56.0	52.0	46.7	42.7	42.7	42.7	41.3	38.7
57.5°	66.7	52.0	50.7	49.3	45.3	40.0	37.3	34.7	33.3	29.3	28.0
60°	69.3	46.7	46.7	44.0	40.0	34.7	30.7	26.7	24.0	21.3	21.3
62.5°	56.0	42.7	41.3	38.7	33.3	28.0	24.0	20.0	18.7	17.3	17.3
65°	45.3	38.7	36.0	32.0	28.0	22.7	18.7	16.0	14.7	14.7	16.0
67.5°	41.3	34.7	30.7	26.7	22.7	17.3	14.7	13.3	13.3	14.7	14.7
69°	38.7	32.0	28.0	24.0	20.0	16.0	13.3	13.3	13.3	13.3	14.7
70°	36.0	30.7	26.7	22.7	17.3	13.3	12.0	12.0	13.3	13.3	14.7
72.5°	28.0	24.0	22.7	18.7	13.3	12.0	10.7	12.0	12.0	13.3	13.3
75°	21.3	17.3	17.3	14.7	10.7	9.3	9.3	10.7	10.7	12.0	12.0
77.5°	14.7	12.0	12.0	10.7	9.3	8.0	8.0	9.3	10.7	10.7	12.0
80°	10.7	9.3	8.0	9.3	8.0	6.7	8.0	9.3	9.3	10.7	10.7
82.5°	8.0	8.0	8.0	8.0	6.7	6.7	8.0	8.0	9.3	10.7	10.7
85°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	8.0	8.0	9.3	9.3
87.5°	4.0	4.0	4.0	5.3	5.3	6.7	6.7	6.7	6.7	8.0	8.0
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: P151810

CATALOG NUMBER: TLM-E04-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	614.7	614.7	614.7	614.7
2.5°	464.0	462.7	457.3	458.7
5°	325.3	317.3	322.7	321.3
7.5°	238.7	237.3	236.0	238.7
10°	204.0	204.0	202.7	204.0
12.5°	192.0	192.0	192.0	192.0
15°	182.7	182.7	181.3	181.3
17.5°	172.0	172.0	172.0	170.7
20°	161.3	160.0	160.0	160.0
22.5°	149.3	148.0	148.0	148.0
25°	137.3	136.0	136.0	136.0
27.5°	125.3	124.0	122.7	122.7
30°	113.3	112.0	110.7	110.7
32.5°	101.3	100.0	98.7	98.7
35°	90.7	90.7	89.3	88.0
37.5°	81.3	81.3	81.3	81.3
40°	74.7	76.0	76.0	76.0
42.5°	70.7	72.0	73.3	74.7
45°	68.0	70.7	72.0	72.0
47.5°	66.7	68.0	69.3	69.3
50°	61.3	60.0	60.0	60.0
52.5°	49.3	46.7	45.3	44.0
55°	36.0	34.7	32.0	32.0
57.5°	25.3	25.3	24.0	24.0
60°	20.0	20.0	18.7	20.0
62.5°	17.3	17.3	17.3	17.3
65°	16.0	16.0	16.0	16.0
67.5°	16.0	16.0	16.0	16.0
69°	14.7	14.7	14.7	14.7
70°	14.7	14.7	14.7	14.7
72.5°	13.3	13.3	13.3	13.3
75°	12.0	13.3	13.3	13.3
77.5°	12.0	12.0	12.0	12.0
80°	10.7	10.7	12.0	12.0
82.5°	10.7	10.7	10.7	10.7
85°	9.3	9.3	10.7	10.7
87.5°	8.0	8.0	9.3	9.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)