

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: P151824

Luminaire Tested: **TLM-F05-LED-E1-SL4-HSS-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P151824
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-F05-LED-E1-SL4-HSS-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (35) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7671.2 lumens
Efficiency: N/A
Efficacy: 57.5 lumens/watt
Spacing Criteria (0/90/45): 4.24 / 0.98 / 4.1
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

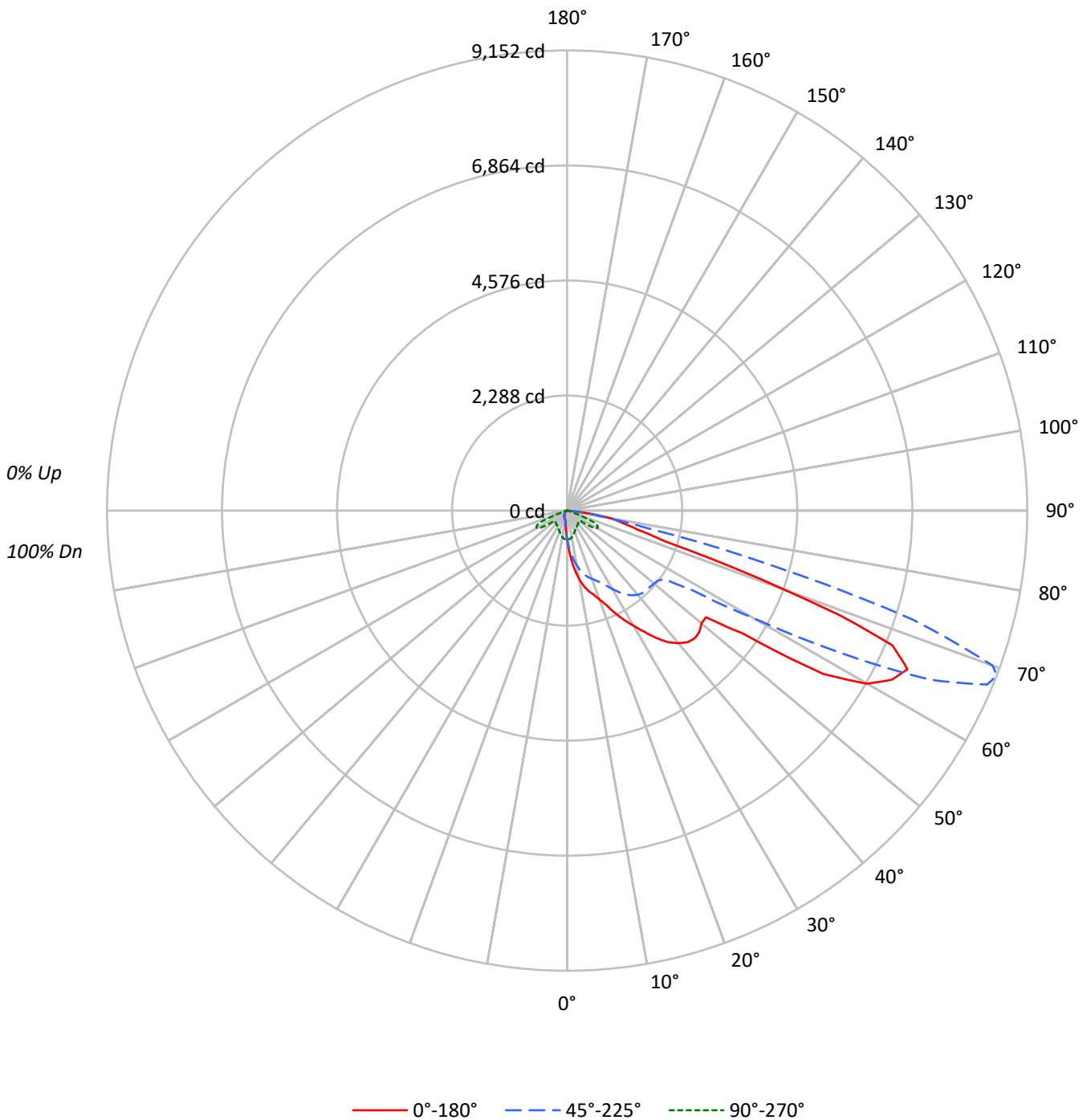
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7513	7513	7513
5°	12842	7411	3943
10°	18286	7082	2532
15°	22238	6513	2295
20°	25946	6070	2081
25°	32116	5808	1834
30°	39631	5683	1562
35°	48982	5630	1312
40°	58271	5722	1212
45°	65869	5970	1245
50°	70382	6567	1140
55°	96178	11366	683
60°	178582	18024	488
65°	229134	19473	463
70°	173014	8054	523
75°	72033	3087	631
80°	65788	2913	844
85°	5803	2619	1503



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	0.8
10°-20°	205.3	2.7
20°-30°	392.9	5.1
30°-40°	653.5	8.5
40°-50°	884.2	11.5
50°-60°	1382.8	18.0
60°-70°	2843.1	37.1
70°-80°	1144.0	14.9
80°-90°	105.8	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°	657.8	8.6
0°-40°	1311.2	17.1
0°-60°	3578.3	46.6
0°-90°	7671.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7671.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	579	579	579	579	579	
5°	986	839	569	362	303	106
15°	1656	1313	485	180	171	473
25°	2244	1581	406	143	128	1051
35°	3094	2041	356	102	83	1940
45°	3592	2234	326	67	68	2745
55°	4254	2375	503	44	30	4289
65°	7467	7962	635	21	15	6841
75°	1438	4192	62	9	13	1927
85°	39	168	18	6	10	241
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°	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3
2.5°	772.8	764.0	754.0	754.0	741.4	741.4	733.9	713.8	711.3	700.0	688.6
5°	986.5	978.9	966.4	955.1	945.0	927.4	914.8	891.0	864.6	839.4	816.8
7.5°	1195.1	1191.3	1168.7	1164.9	1148.6	1119.7	1094.5	1059.4	1014.1	978.9	937.5
10°	1388.6	1379.8	1374.8	1353.4	1329.5	1298.1	1259.2	1216.4	1163.7	1108.4	1049.3
12.5°	1541.9	1536.9	1514.3	1505.5	1480.3	1448.9	1399.9	1344.6	1291.8	1220.2	1151.1
15°	1656.3	1647.5	1632.4	1618.6	1588.4	1560.8	1515.5	1455.2	1391.1	1313.2	1230.3
17.5°	1751.8	1735.4	1731.7	1710.3	1678.9	1646.2	1596.0	1540.7	1465.3	1387.3	1296.9
20°	1880.0	1857.3	1849.8	1818.4	1781.9	1736.7	1678.9	1609.8	1530.6	1445.2	1352.2
22.5°	2030.8	2014.4	1998.1	1970.4	1923.9	1859.9	1775.7	1700.3	1599.7	1505.5	1404.9
25°	2244.4	2230.6	2204.2	2166.5	2108.7	2032.0	1930.2	1819.6	1701.5	1580.9	1462.7
27.5°	2451.7	2439.2	2420.3	2391.4	2326.1	2241.9	2116.2	1975.5	1825.9	1680.1	1549.5
30°	2646.5	2635.2	2616.4	2587.5	2529.6	2446.7	2304.7	2153.9	1967.9	1798.3	1641.2
32.5°	2856.4	2852.6	2831.2	2789.8	2739.5	2627.7	2473.1	2311.0	2122.5	1926.5	1743.0
35°	3093.9	3065.0	3044.9	3003.4	2918.0	2798.6	2617.6	2440.4	2241.9	2040.8	1836.0
37.5°	3295.0	3267.3	3242.2	3189.4	3085.1	2933.0	2728.2	2533.4	2328.6	2123.7	1915.1
40°	3442.0	3428.2	3398.0	3328.9	3212.0	3031.1	2809.9	2597.5	2391.4	2185.3	1979.2
42.5°	3551.3	3529.9	3496.0	3424.4	3286.2	3080.1	2842.6	2623.9	2420.3	2223.0	2020.7
45°	3591.5	3573.9	3542.5	3464.6	3315.1	3093.9	2841.3	2616.4	2421.6	2234.3	2048.3
47.5°	3567.6	3550.1	3522.4	3449.5	3302.5	3077.6	2818.7	2595.0	2409.0	2238.1	2073.5
50°	3488.5	3478.4	3457.1	3395.5	3263.5	3046.1	2798.6	2583.7	2406.5	2257.0	2108.7
52.5°	3480.9	3474.7	3448.3	3386.7	3252.2	3036.1	2796.1	2590.0	2427.9	2280.8	2133.8
55°	4253.8	4164.6	3964.7	3795.1	3516.1	3184.4	2923.0	2691.8	2518.3	2375.1	2272.0
57.5°	6045.8	5912.6	5649.9	5327.0	4686.1	4056.5	3552.6	3188.1	3008.4	2943.1	2982.0
60°	6885.2	6861.3	6819.9	6666.6	6338.6	5797.0	5193.8	4541.6	4280.2	4257.5	4336.7
62.5°	7283.6	7268.5	7281.1	7262.2	7160.4	7002.1	6828.7	6547.2	6288.3	6121.2	5766.8
65°	7467.0	7477.1	7548.7	7605.3	7617.8	7659.3	7786.2	8136.8	8393.2	7962.2	6978.2
67.5°	7000.8	7059.9	7224.5	7430.6	7671.9	7905.6	8282.6	9021.5	9548.1	9041.6	7644.2
69°	5795.7	5824.6	6226.7	6615.0	7204.4	7616.6	8163.2	9132.1	9724.0	9152.2	7591.5
70°	4562.9	4589.3	5020.3	5548.1	6544.7	7075.0	7790.0	8944.9	9559.4	9005.2	7320.0
72.5°	2058.4	2020.7	2172.8	2455.5	3538.7	4380.7	5631.1	7247.1	7886.8	7214.5	5476.5
75°	1437.6	1421.3	1437.6	1438.9	1607.3	2073.5	2616.4	3928.3	4858.2	4192.2	2616.4
77.5°	1113.4	1102.1	1090.8	1078.2	1098.3	1230.3	1283.0	1393.6	1809.6	1711.6	997.8
80°	880.9	870.9	898.5	889.7	889.7	904.8	894.7	853.3	775.4	718.8	643.4
82.5°	409.7	412.2	412.2	447.4	539.1	629.6	658.5	617.0	547.9	466.2	375.7
85°	39.0	44.0	74.1	114.4	227.5	256.4	257.6	213.6	213.6	168.4	135.7
87.5°	0.0	1.3	1.3	1.3	11.3	31.4	26.4	7.5	3.8	3.8	6.3
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°	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3
2.5°	668.5	664.8	649.7	634.6	620.8	605.7	591.9	578.1	563.0	551.7	537.8
5°	781.6	754.0	722.6	692.4	662.3	630.8	598.2	569.3	539.1	511.5	485.1
7.5°	896.0	842.0	799.2	745.2	696.2	647.2	601.9	555.4	512.7	472.5	434.8
10°	992.8	927.4	860.8	791.7	721.3	656.0	593.1	537.8	481.3	432.3	385.8
12.5°	1071.9	989.0	907.3	820.6	741.4	658.5	580.6	514.0	447.4	392.1	344.3
15°	1143.6	1048.1	950.0	849.5	749.0	654.7	568.0	485.1	417.2	354.4	300.3
17.5°	1201.4	1092.0	981.4	868.3	760.3	649.7	551.7	465.0	385.8	320.4	267.7
20°	1251.6	1137.3	1017.9	891.0	767.8	648.4	537.8	439.8	358.1	289.0	237.5
22.5°	1298.1	1183.8	1055.6	919.9	779.1	647.2	525.3	421.0	334.3	265.2	213.6
25°	1350.9	1230.3	1095.8	950.0	799.2	652.2	517.7	405.9	312.9	242.5	194.8
27.5°	1410.0	1283.0	1143.6	987.7	825.6	662.3	515.2	389.6	294.1	221.2	179.7
30°	1492.9	1345.9	1191.3	1025.4	849.5	673.6	512.7	379.5	275.2	204.8	164.6
32.5°	1565.8	1407.5	1244.1	1064.4	875.9	684.9	511.5	365.7	257.6	188.5	153.3
35°	1642.4	1464.0	1289.3	1102.1	898.5	697.4	510.2	355.6	241.3	172.2	142.0
37.5°	1709.1	1511.8	1324.5	1134.8	923.6	708.8	511.5	346.8	226.2	158.3	131.9
40°	1765.6	1560.8	1363.5	1164.9	950.0	726.3	512.7	338.0	211.1	145.8	123.2
42.5°	1815.9	1607.3	1404.9	1198.8	980.2	746.5	520.3	330.5	198.6	134.5	114.4
45°	1854.8	1650.0	1450.2	1246.6	1029.2	779.1	534.1	325.5	186.0	124.4	106.8
47.5°	1895.0	1712.8	1526.8	1322.0	1100.8	830.6	558.0	324.2	175.9	116.9	100.5
50°	1950.3	1775.7	1594.7	1398.7	1166.2	883.4	586.9	325.5	163.4	109.3	94.2
52.5°	1990.5	1839.7	1682.7	1531.9	1322.0	1044.3	698.7	348.1	157.1	103.0	86.7
55°	2228.1	2201.7	2205.4	2230.6	2068.5	1776.9	1168.7	502.7	184.7	116.9	85.5
57.5°	3141.6	3234.6	3288.7	3287.4	3019.7	2504.5	1569.6	645.9	206.1	135.7	101.8
60°	4343.0	4272.6	4173.4	3928.3	3572.7	2858.9	1755.5	694.9	178.4	108.1	93.0
62.5°	5404.9	4992.7	4627.0	4229.9	3763.7	2982.0	1793.2	691.2	155.8	81.7	65.3
65°	6067.1	5325.7	4735.1	4237.4	3688.3	2879.0	1696.5	634.6	131.9	66.6	54.0
67.5°	6225.5	5146.0	4310.3	3675.7	3081.3	2240.6	1245.3	477.5	103.0	55.3	47.8
69°	5879.9	4574.2	3571.4	2851.4	2241.9	1486.6	770.3	301.6	79.2	50.3	44.0
70°	5408.6	3978.6	2909.2	2288.4	1660.0	1044.3	539.1	212.4	64.1	46.5	40.2
72.5°	3479.7	2089.8	1430.1	995.3	684.9	416.0	211.1	95.5	49.0	39.0	32.7
75°	1349.6	772.8	560.5	426.0	333.0	231.2	128.2	61.6	41.5	32.7	25.1
77.5°	664.8	508.9	416.0	285.3	165.9	103.0	69.1	47.8	33.9	23.9	16.3
80°	525.3	349.4	208.6	129.4	98.0	74.1	52.8	39.0	25.1	15.1	11.3
82.5°	268.9	147.0	108.1	88.0	72.9	57.8	42.7	27.6	16.3	10.1	8.8
85°	84.2	61.6	55.3	54.0	50.3	41.5	30.2	17.6	10.1	6.3	6.3
87.5°	6.3	8.8	11.3	8.8	10.1	8.8	11.3	7.5	5.0	5.0	3.8
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°	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3
2.5°	527.8	512.7	498.9	490.1	473.8	467.5	461.2	458.7	447.4	449.9	439.8
5°	461.2	434.8	414.7	394.6	375.7	361.9	350.6	336.8	325.5	320.4	310.4
7.5°	400.9	366.9	340.6	319.2	296.6	279.0	263.9	253.8	243.8	233.7	228.7
10°	348.1	311.7	281.5	260.1	238.8	223.7	212.4	204.8	198.6	194.8	193.5
12.5°	299.1	263.9	236.3	217.4	201.1	193.5	188.5	184.7	183.5	182.2	182.2
15°	261.4	226.2	204.8	191.0	183.5	179.7	178.4	175.9	173.4	172.2	172.2
17.5°	226.2	199.8	184.7	177.2	173.4	170.9	168.4	165.9	163.4	162.1	162.1
20°	202.3	181.0	173.4	168.4	164.6	162.1	158.3	155.8	154.6	153.3	152.1
22.5°	183.5	169.6	164.6	160.9	155.8	152.1	149.5	147.0	144.5	143.3	142.0
25°	169.6	160.9	157.1	152.1	147.0	143.3	139.5	135.7	133.2	131.9	129.4
27.5°	159.6	153.3	148.3	142.0	137.0	133.2	129.4	125.7	123.2	120.6	119.4
30°	150.8	144.5	138.2	133.2	126.9	123.2	118.1	114.4	113.1	110.6	108.1
32.5°	142.0	135.7	129.4	123.2	116.9	111.8	109.3	104.3	101.8	100.5	98.0
35°	131.9	125.7	118.1	113.1	106.8	101.8	98.0	94.2	91.7	89.2	88.0
37.5°	123.2	115.6	108.1	101.8	96.8	91.7	88.0	84.2	81.7	79.2	77.9
40°	113.1	105.6	98.0	91.7	86.7	82.9	79.2	75.4	72.9	71.6	71.6
42.5°	104.3	95.5	88.0	82.9	79.2	74.1	70.4	66.6	65.3	64.1	65.3
45°	95.5	86.7	80.4	75.4	71.6	66.6	62.8	60.3	59.1	60.3	61.6
47.5°	88.0	79.2	72.9	69.1	65.3	61.6	57.8	55.3	55.3	57.8	60.3
50°	80.4	71.6	66.6	64.1	60.3	56.5	51.5	50.3	51.5	54.0	56.5
52.5°	72.9	62.8	59.1	57.8	54.0	50.3	46.5	45.2	46.5	49.0	47.8
55°	65.3	55.3	54.0	52.8	49.0	44.0	40.2	40.2	40.2	39.0	36.4
57.5°	62.8	49.0	47.8	46.5	42.7	37.7	35.2	32.7	31.4	27.6	26.4
60°	65.3	44.0	44.0	41.5	37.7	32.7	28.9	25.1	22.6	20.1	20.1
62.5°	52.8	40.2	39.0	36.4	31.4	26.4	22.6	18.8	17.6	16.3	16.3
65°	42.7	36.4	33.9	30.2	26.4	21.4	17.6	15.1	13.8	13.8	15.1
67.5°	39.0	32.7	28.9	25.1	21.4	16.3	13.8	12.6	12.6	13.8	13.8
69°	36.4	30.2	26.4	22.6	18.8	15.1	12.6	12.6	12.6	12.6	13.8
70°	33.9	28.9	25.1	21.4	16.3	12.6	11.3	11.3	12.6	12.6	13.8
72.5°	26.4	22.6	21.4	17.6	12.6	11.3	10.1	11.3	11.3	12.6	12.6
75°	20.1	16.3	16.3	13.8	10.1	8.8	8.8	10.1	10.1	11.3	11.3
77.5°	13.8	11.3	11.3	10.1	8.8	7.5	7.5	8.8	10.1	10.1	11.3
80°	10.1	8.8	7.5	8.8	7.5	6.3	7.5	8.8	8.8	10.1	10.1
82.5°	7.5	7.5	7.5	7.5	6.3	6.3	7.5	7.5	8.8	10.1	10.1
85°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	7.5	7.5	8.8	8.8
87.5°	3.8	3.8	3.8	5.0	5.0	6.3	6.3	6.3	6.3	7.5	7.5
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: P151824

CATALOG NUMBER: TLM-F05-LED-E1-SL4-HSS-7030

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	579.3	579.3	579.3	579.3
2.5°	437.3	436.1	431.0	432.3
5°	306.6	299.1	304.1	302.9
7.5°	224.9	223.7	222.4	224.9
10°	192.3	192.3	191.0	192.3
12.5°	181.0	181.0	181.0	181.0
15°	172.2	172.2	170.9	170.9
17.5°	162.1	162.1	162.1	160.9
20°	152.1	150.8	150.8	150.8
22.5°	140.7	139.5	139.5	139.5
25°	129.4	128.2	128.2	128.2
27.5°	118.1	116.9	115.6	115.6
30°	106.8	105.6	104.3	104.3
32.5°	95.5	94.2	93.0	93.0
35°	85.5	85.5	84.2	82.9
37.5°	76.7	76.7	76.7	76.7
40°	70.4	71.6	71.6	71.6
42.5°	66.6	67.9	69.1	70.4
45°	64.1	66.6	67.9	67.9
47.5°	62.8	64.1	65.3	65.3
50°	57.8	56.5	56.5	56.5
52.5°	46.5	44.0	42.7	41.5
55°	33.9	32.7	30.2	30.2
57.5°	23.9	23.9	22.6	22.6
60°	18.8	18.8	17.6	18.8
62.5°	16.3	16.3	16.3	16.3
65°	15.1	15.1	15.1	15.1
67.5°	15.1	15.1	15.1	15.1
69°	13.8	13.8	13.8	13.8
70°	13.8	13.8	13.8	13.8
72.5°	12.6	12.6	12.6	12.6
75°	11.3	12.6	12.6	12.6
77.5°	11.3	11.3	11.3	11.3
80°	10.1	10.1	11.3	11.3
82.5°	10.1	10.1	10.1	10.1
85°	8.8	8.8	10.1	10.1
87.5°	7.5	7.5	8.8	8.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)