

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: P150685

Luminaire Tested: **TLM-F05-LED-E1-SL3-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P150685
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
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-SL3-HSS
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (35) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7156.6 lumens
Efficiency: N/A
Efficacy: 53.7 lumens/watt
Spacing Criteria (0/90/45): 4.23 / 3.52 / 4.34
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

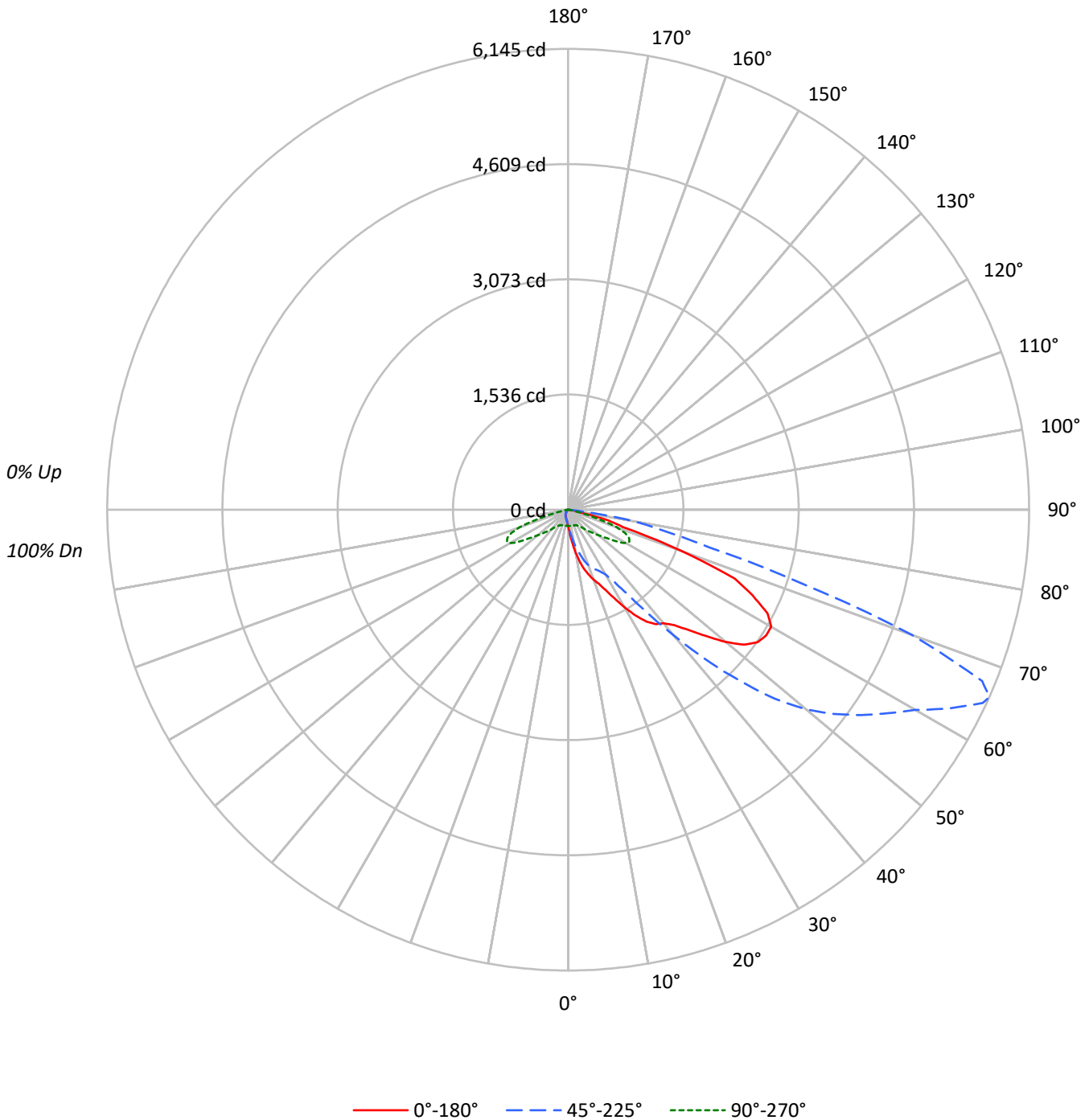
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	105	98	93	87	102	96	91	86	92	87	83		88	84	81		84	81	78	76
2	91	80	71	63	88	78	69	62	74	67	61		71	64	59		67	62	58	55
3	80	66	55	46	77	64	54	46	61	52	45		58	50	44		55	48	43	40
4	71	55	43	35	68	53	43	34	51	41	34		48	40	33		45	38	32	30
5	63	47	35	27	61	45	34	26	43	33	26		41	32	26		39	31	25	23
6	57	40	29	21	55	39	29	21	37	28	21		35	27	20		33	26	20	17
7	52	35	24	17	50	34	24	17	33	23	17		31	23	16		29	22	16	14
8	48	31	21	14	46	30	21	14	29	20	14		28	19	13		26	19	13	11
9	44	28	18	12	42	27	18	12	26	17	11		25	17	11		24	16	11	9
10	41	25	16	10	39	25	16	10	24	15	10		23	15	10		22	15	10	7

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2801	2801	2801
5°	4693	2821	2059
10°	7700	2845	1721
15°	10991	2965	1459
20°	13671	3067	1253
25°	16912	3249	1063
30°	22479	3637	906
35°	28841	4302	763
40°	33449	5659	606
45°	41535	7646	455
50°	55323	10660	444
55°	69684	15585	497
60°	81043	23124	534
65°	83301	27464	592
70°	60880	26372	679
75°	27438	11477	897
80°	4929	2875	1337
85°	417	2559	2455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	0.3
10°-20°	102.5	1.4
20°-30°	221.1	3.1
30°-40°	472.3	6.6
40°-50°	1044.4	14.6
50°-60°	1770.0	24.7
60°-70°	2361.9	33.0
70°-80°	1040.4	14.5
80°-90°	119.8	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°	347.9	4.9
0°-40°	820.1	11.5
0°-60°	3634.5	50.8
0°-90°	7156.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7156.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	216	216	216	216	216	
5°	360	305	217	164	158	41
15°	819	625	221	117	109	234
25°	1182	882	227	85	74	566
35°	1822	1365	272	58	48	1130
45°	2265	3213	417	34	25	1790
55°	3082	4774	689	16	22	2716
65°	2715	6095	895	12	19	2592
75°	548	1951	229	10	18	604
85°	3	41	17	8	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0
2.5°	272.4	271.0	265.5	265.5	257.3	251.8	244.9	238.0	238.0	236.7	235.3
5°	360.5	352.2	350.8	335.7	323.3	305.4	288.9	266.9	264.2	261.4	260.0
7.5°	458.2	456.8	444.4	426.5	401.8	368.7	335.7	299.9	294.4	291.7	286.2
10°	584.7	577.9	561.4	531.1	493.9	449.9	396.3	339.8	333.0	327.5	324.7
12.5°	705.8	693.4	683.8	645.3	598.5	533.8	469.2	388.0	382.5	375.6	364.6
15°	818.6	807.6	791.1	758.1	705.8	624.6	549.0	449.9	436.2	426.5	418.3
17.5°	906.7	899.8	880.6	843.4	787.0	715.5	624.6	513.2	502.2	489.8	474.7
20°	990.6	981.0	950.7	899.8	839.3	784.2	714.1	595.8	580.6	565.5	549.0
22.5°	1070.4	1060.8	1011.3	927.3	862.7	839.3	814.5	689.3	665.9	653.5	637.0
25°	1181.9	1161.2	1084.2	950.7	864.0	881.9	924.6	810.4	788.4	770.5	744.3
27.5°	1331.8	1304.3	1183.3	985.1	869.6	928.7	1051.2	957.6	934.2	913.6	884.7
30°	1501.1	1483.2	1338.7	1067.7	909.5	997.5	1192.9	1144.7	1117.2	1092.4	1058.0
32.5°	1671.7	1646.9	1503.8	1224.5	1016.8	1131.0	1370.4	1362.1	1326.3	1303.0	1265.8
35°	1821.7	1809.3	1703.3	1481.8	1261.7	1364.9	1607.0	1616.7	1585.0	1560.2	1519.0
37.5°	1923.5	1923.5	1902.8	1758.4	1651.0	1728.1	1955.1	1956.5	1924.8	1868.4	1847.8
40°	1975.8	1990.9	2065.2	2092.7	2087.2	2186.3	2411.9	2387.1	2361.0	2332.1	2263.3
42.5°	2083.1	2096.8	2255.1	2444.9	2568.8	2699.5	2854.9	2846.7	2815.0	2762.8	2699.5
45°	2264.7	2282.6	2471.1	2772.4	3026.9	3212.7	3311.7	3273.2	3241.6	3192.0	3159.0
47.5°	2495.8	2530.2	2743.5	3116.4	3423.2	3730.0	3833.2	3731.4	3703.9	3665.3	3611.7
50°	2742.1	2775.1	3002.2	3428.7	3775.4	4141.4	4313.4	4141.4	4101.5	4089.1	4028.6
52.5°	2955.4	2982.9	3201.7	3669.5	4045.1	4474.3	4724.8	4497.7	4468.8	4427.6	4383.5
55°	3082.0	3104.0	3309.0	3785.0	4228.1	4774.3	5122.4	4922.9	4880.2	4863.7	4800.4
57.5°	3124.6	3146.6	3331.0	3800.2	4327.1	5048.1	5605.3	5612.2	5561.3	5502.1	5482.9
60°	3124.6	3149.4	3304.9	3763.0	4423.4	5339.8	6249.2	6823.0	6712.9	6701.9	6631.7
62.5°	2995.3	3018.7	3175.5	3648.8	4552.8	5733.3	7146.3	8158.9	8127.3	8055.7	7940.2
65°	2714.6	2728.4	2882.5	3357.1	4503.2	6095.1	7923.7	9047.8	8996.8	8856.5	8707.9
66°	2588.0	2599.0	2743.5	3190.7	4340.9	6144.7	8061.3	9159.2	9075.3	8956.9	8789.1
67.5°	2405.0	2424.3	2526.1	2881.1	3951.5	5972.7	7974.6	9080.8	9007.9	8864.8	8696.9
70°	1605.6	1591.9	1951.0	2211.0	3010.4	4866.5	7154.5	8153.4	8154.8	8087.4	8020.0
72.5°	762.2	770.5	875.1	1360.7	1970.3	3251.2	5694.7	6507.9	6601.4	6480.4	6396.4
75°	547.6	560.0	623.3	832.4	1175.0	1951.0	3691.5	4551.4	4554.1	4339.5	4148.3
77.5°	159.6	166.5	233.9	513.2	880.6	1316.7	2120.2	2530.2	2471.1	2317.0	2172.5
80°	66.0	66.0	68.8	163.7	353.6	894.3	1483.2	1948.2	1941.4	1882.2	1796.9
82.5°	24.8	26.1	33.0	67.4	83.9	220.1	989.3	1691.0	1686.8	1602.9	1542.4
85°	2.8	2.8	8.3	28.9	31.6	41.3	198.1	745.7	741.6	745.7	653.5
87.5°	0.0	0.0	1.4	2.8	4.1	5.5	8.3	28.9	31.6	30.3	27.5
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0
2.5°	235.3	232.5	232.5	231.1	231.1	231.1	229.8	228.4	228.4	227.0	225.6
5°	257.3	254.5	253.2	250.4	249.0	247.7	244.9	243.5	240.8	239.4	238.0
7.5°	283.4	277.9	276.6	272.4	268.3	265.5	262.8	258.7	255.9	250.4	249.0
10°	316.5	309.6	304.1	298.6	294.4	287.6	283.4	277.9	272.4	268.3	264.2
12.5°	359.1	349.5	341.2	335.7	326.1	317.8	309.6	305.4	294.4	288.9	282.1
15°	405.9	394.9	385.2	374.2	367.4	353.6	342.6	330.2	324.7	315.1	304.1
17.5°	466.4	448.5	433.4	422.4	408.6	394.9	382.5	370.1	353.6	342.6	328.8
20°	531.1	516.0	495.3	476.1	459.5	443.0	425.1	408.6	393.5	375.6	359.1
22.5°	613.6	591.6	566.9	547.6	525.6	507.7	482.9	460.9	436.2	412.8	393.5
25°	718.2	689.3	665.9	638.4	612.3	584.7	554.5	527.0	495.3	473.3	440.3
27.5°	847.5	820.0	788.4	752.6	726.5	685.2	645.3	610.9	573.7	539.3	502.2
30°	1012.6	972.7	939.7	905.3	853.0	813.1	766.4	719.6	668.7	634.3	577.9
32.5°	1210.8	1168.1	1118.6	1069.1	1020.9	964.5	906.7	848.9	792.5	729.2	671.4
35°	1452.9	1402.0	1345.6	1291.9	1217.6	1157.1	1084.2	1004.4	941.1	868.2	795.3
37.5°	1773.5	1689.6	1640.0	1583.6	1483.2	1400.6	1319.5	1239.7	1128.2	1051.2	948.0
40°	2175.3	2125.7	2044.6	1953.7	1862.9	1754.2	1644.2	1538.2	1408.9	1301.6	1181.9
42.5°	2647.2	2574.3	2491.7	2361.0	2268.8	2140.9	2015.7	1875.3	1717.1	1579.5	1439.2
45°	3090.2	3003.5	2940.2	2809.5	2713.2	2561.9	2410.5	2261.9	2078.9	1901.5	1739.1
47.5°	3569.0	3497.5	3392.9	3287.0	3189.3	3018.7	2854.9	2674.7	2482.1	2271.6	2061.1
50°	3990.0	3933.6	3862.1	3734.1	3625.4	3482.3	3289.7	3093.0	2849.4	2640.3	2400.9
52.5°	4347.8	4303.7	4203.3	4112.5	4014.8	3880.0	3708.0	3519.5	3256.7	3026.9	2754.5
55°	4770.2	4738.5	4650.5	4594.0	4507.4	4378.0	4217.1	4042.3	3764.4	3514.0	3205.8
57.5°	5462.2	5437.5	5360.4	5337.0	5251.7	5138.9	4940.8	4753.6	4428.9	4118.0	3765.8
60°	6608.3	6558.8	6446.0	6388.2	6207.9	6056.6	5799.3	5542.0	5149.9	4753.6	4329.9
62.5°	7835.6	7696.6	7482.0	7297.6	7041.7	6778.9	6435.0	6041.5	5581.9	5111.4	4624.3
65°	8497.4	8260.8	7989.7	7696.6	7365.1	6978.4	6545.0	6073.1	5579.2	5082.5	4567.9
66°	8573.1	8306.2	8018.6	7692.5	7323.8	6912.4	6472.1	5976.8	5463.6	4979.3	4464.7
67.5°	8478.1	8198.8	7894.8	7532.9	7133.9	6707.4	6245.1	5730.5	5236.6	4745.4	4244.6
70°	7813.6	7535.7	7264.6	6883.5	6458.4	6029.1	5591.6	5016.4	4548.6	4097.4	3651.6
72.5°	6239.6	6051.1	5782.8	5456.7	5042.6	4539.0	4174.4	3659.8	3253.9	2816.4	2471.1
75°	3899.2	3633.7	3302.1	2886.6	2570.1	2161.5	1948.2	1557.5	1326.3	1124.1	928.7
77.5°	1993.6	1794.1	1561.6	1327.7	1103.5	880.6	681.1	481.6	324.7	225.6	167.9
80°	1646.9	1470.8	1278.2	1064.9	866.8	672.8	484.3	330.2	210.5	137.6	107.3
82.5°	1360.7	1212.1	1040.2	842.0	670.1	528.3	367.4	239.4	148.6	96.3	75.7
85°	579.2	525.6	405.9	322.0	242.2	178.9	125.2	83.9	59.2	48.2	44.0
87.5°	24.8	27.5	26.1	20.6	15.1	15.1	13.8	11.0	11.0	11.0	11.0
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0
2.5°	225.6	224.3	222.9	222.9	221.5	220.1	211.9	205.0	196.8	191.2	185.7
5°	235.3	233.9	231.1	229.8	227.0	225.6	207.8	192.6	180.2	170.6	163.7
7.5°	244.9	243.5	239.4	235.3	233.9	231.1	202.3	183.0	166.5	155.5	148.6
10°	257.3	253.2	249.0	243.5	239.4	235.3	196.8	172.0	154.1	144.5	137.6
12.5°	275.2	268.3	261.4	254.5	249.0	242.2	194.0	162.4	144.5	133.5	126.6
15°	295.8	286.2	277.9	269.7	260.0	253.2	188.5	154.1	136.2	125.2	116.9
17.5°	315.1	304.1	291.7	279.3	269.7	260.0	183.0	145.8	128.0	116.9	108.7
20°	342.6	326.1	310.9	295.8	282.1	269.7	174.7	137.6	121.1	108.7	100.4
22.5°	372.9	353.6	334.3	313.7	295.8	279.3	167.9	130.7	114.2	101.8	92.2
25°	411.4	388.0	361.9	335.7	315.1	293.1	161.0	123.8	107.3	94.9	85.3
27.5°	465.0	432.0	403.1	370.1	338.5	313.7	155.5	118.3	100.4	88.1	78.4
30°	538.0	489.8	444.4	408.6	371.5	335.7	150.0	111.4	94.9	81.2	70.2
32.5°	619.1	562.7	510.4	456.8	410.0	368.7	144.5	105.9	88.1	74.3	64.7
35°	719.6	648.0	577.9	516.0	459.5	404.5	139.0	100.4	82.6	67.4	57.8
37.5°	864.0	774.6	682.4	602.6	529.7	456.8	134.8	94.9	75.7	60.5	50.9
40°	1062.2	946.6	833.8	725.1	630.2	539.3	129.3	89.4	70.2	55.0	45.4
42.5°	1276.8	1136.5	987.9	865.4	734.7	620.5	123.8	83.9	64.7	49.5	39.9
45°	1543.7	1369.0	1188.8	1022.3	862.7	715.5	118.3	78.4	57.8	44.0	34.4
47.5°	1835.4	1612.5	1408.9	1199.8	1009.9	833.8	111.4	74.3	52.3	38.5	30.3
50°	2135.4	1900.1	1642.8	1404.8	1179.1	952.1	104.6	67.4	46.8	34.4	24.8
52.5°	2458.7	2180.8	1918.0	1622.2	1359.4	1107.6	97.7	61.9	42.7	30.3	20.6
55°	2870.1	2559.1	2250.9	1919.3	1602.9	1287.8	90.8	55.0	37.1	26.1	16.5
57.5°	3387.4	3018.7	2640.3	2266.1	1882.2	1524.5	85.3	48.2	31.6	22.0	13.8
60°	3875.8	3445.2	2987.0	2556.4	2123.0	1706.1	77.0	42.7	27.5	17.9	13.8
62.5°	4129.0	3637.8	3143.9	2669.2	2206.9	1770.8	68.8	35.8	23.4	15.1	12.4
65°	4067.1	3566.3	3087.5	2608.7	2156.0	1729.5	60.5	31.6	20.6	13.8	12.4
66°	3977.7	3482.3	3000.8	2545.4	2113.3	1685.4	56.4	30.3	19.3	13.8	11.0
67.5°	3782.3	3303.5	2843.9	2420.2	1996.4	1601.5	50.9	27.5	17.9	12.4	11.0
70°	3230.6	2795.8	2428.4	2051.4	1706.1	1349.7	41.3	23.4	15.1	11.0	11.0
72.5°	2138.1	1842.3	1597.4	1374.5	1148.9	891.6	34.4	19.3	12.4	11.0	9.6
75°	806.3	729.2	626.0	562.7	491.2	430.6	27.5	12.4	9.6	9.6	9.6
77.5°	143.1	132.1	116.9	107.3	99.1	90.8	22.0	8.3	8.3	9.6	9.6
80°	96.3	89.4	81.2	74.3	68.8	61.9	15.1	6.9	8.3	8.3	9.6
82.5°	68.8	64.7	60.5	55.0	50.9	45.4	9.6	6.9	8.3	8.3	8.3
85°	41.3	38.5	35.8	33.0	28.9	27.5	6.9	6.9	6.9	8.3	8.3
87.5°	11.0	9.6	11.0	11.0	8.3	9.6	5.5	5.5	5.5	6.9	6.9
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: P150685

CATALOG NUMBER: TLM-F05-LED-E1-SL3-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	216.0	216.0	216.0	216.0	216.0
2.5°	183.0	183.0	180.2	184.4	184.4
5°	158.2	158.2	156.8	158.2	158.2
7.5°	144.5	143.1	143.1	143.1	144.5
10°	132.1	130.7	130.7	130.7	130.7
12.5°	121.1	119.7	118.3	119.7	119.7
15°	111.4	108.7	108.7	108.7	108.7
17.5°	103.2	100.4	99.1	99.1	99.1
20°	94.9	90.8	90.8	90.8	90.8
22.5°	86.7	82.6	82.6	82.6	82.6
25°	78.4	74.3	74.3	74.3	74.3
27.5°	71.5	67.4	67.4	67.4	67.4
30°	63.3	60.5	60.5	61.9	60.5
32.5°	57.8	53.7	53.7	55.0	55.0
35°	50.9	48.2	48.2	48.2	48.2
37.5°	44.0	41.3	41.3	41.3	41.3
40°	38.5	35.8	34.4	35.8	35.8
42.5°	33.0	30.3	28.9	28.9	28.9
45°	28.9	24.8	23.4	24.8	24.8
47.5°	23.4	20.6	20.6	22.0	22.0
50°	17.9	17.9	19.3	22.0	22.0
52.5°	16.5	16.5	19.3	22.0	22.0
55°	15.1	16.5	19.3	20.6	22.0
57.5°	13.8	16.5	19.3	20.6	20.6
60°	13.8	15.1	17.9	20.6	20.6
62.5°	12.4	13.8	16.5	19.3	19.3
65°	12.4	13.8	16.5	19.3	19.3
66°	12.4	13.8	16.5	19.3	19.3
67.5°	12.4	13.8	16.5	19.3	19.3
70°	12.4	13.8	16.5	17.9	17.9
72.5°	11.0	12.4	15.1	17.9	17.9
75°	11.0	12.4	15.1	17.9	17.9
77.5°	11.0	12.4	15.1	17.9	17.9
80°	11.0	12.4	15.1	16.5	17.9
82.5°	9.6	12.4	13.8	16.5	16.5
85°	9.6	11.0	13.8	15.1	16.5
87.5°	8.3	9.6	11.0	13.8	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)