

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: P156611

Luminaire Tested: **TLM-E01-LED-E1-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156611
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-E01-LED-E1-T4-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (21) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3100.9 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
CIE Type: Direct

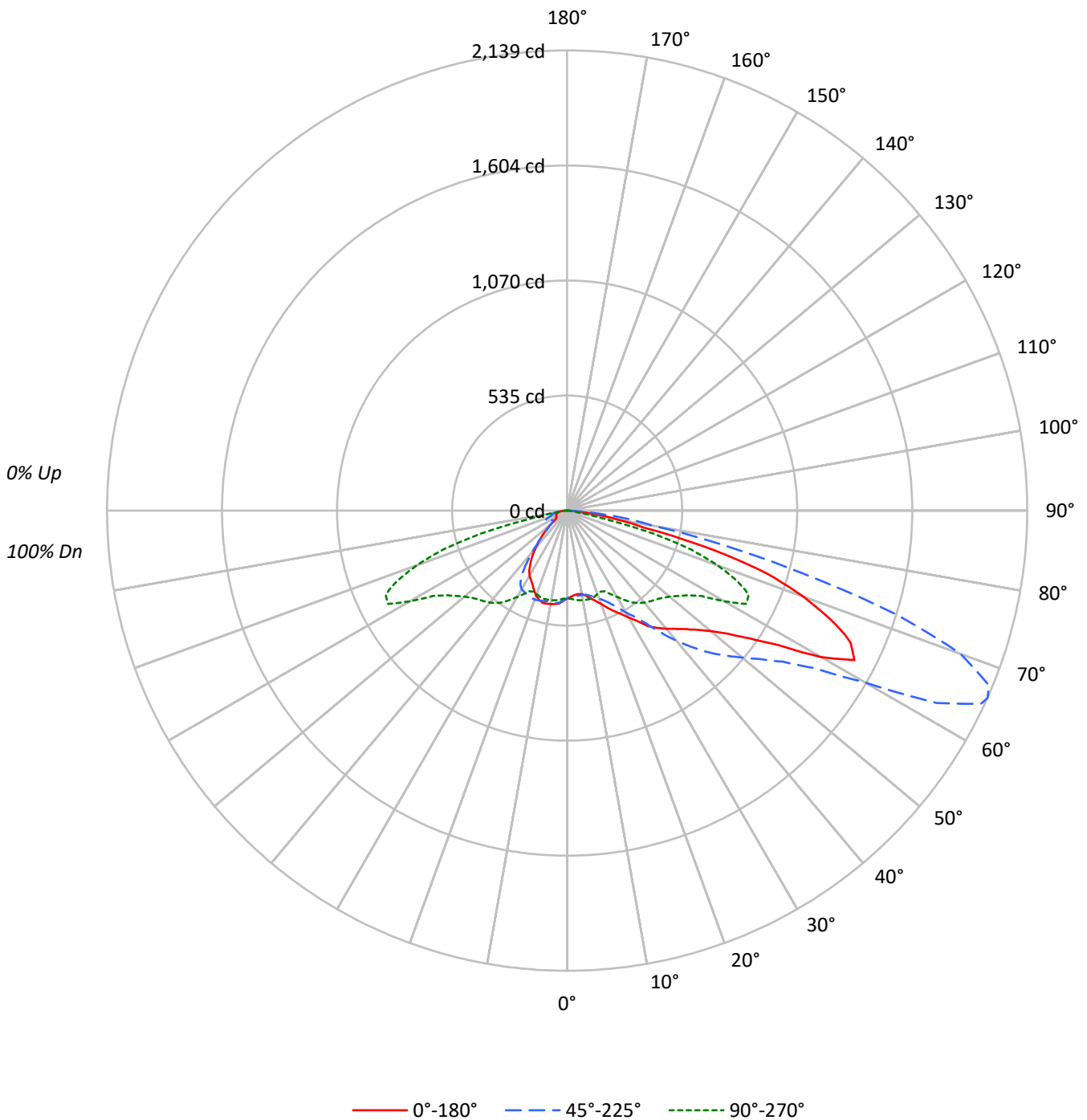
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	25878	25878	25878
5°	25042	26434	27566
10°	25332	27222	28347
15°	27754	27780	29078
20°	31110	27842	28347
25°	36007	28937	26548
30°	42010	33888	25531
35°	50683	40240	22972
40°	59230	46196	18969
45°	69800	52285	14426
50°	85817	61319	9230
55°	114143	75661	6910
60°	172349	106639	7281
65°	217945	139379	8405
70°	216173	137716	9997
75°	171443	101990	12305
80°	86928	21440	15351
85°	12641	17654	19615



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.7	1.3
10°-20°	120.5	3.9
20°-30°	207.6	6.7
30°-40°	314.0	10.1
40°-50°	407.0	13.1
50°-60°	561.2	18.1
60°-70°	871.9	28.1
70°-80°	507.0	16.3
80°-90°	72.1	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°	367.8	11.9
0°-40°	681.8	22.0
0°-60°	1650.0	53.2
0°-90°	3100.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3100.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	409	409	409	409	409	
5°	394	400	416	430	434	38
15°	423	409	424	435	444	121
25°	515	476	414	433	380	240
35°	656	641	521	367	297	410
45°	780	933	584	154	161	609
55°	1034	1225	685	79	63	958
65°	1455	2124	930	112	56	1377
75°	701	1142	417	70	50	722
85°	17	119	24	29	27	75
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°	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7
2.5°	401.2	402.6	401.5	401.9	401.9	402.2	402.2	402.6	402.2	403.3	403.9
5°	394.0	394.7	394.4	395.1	395.7	397.1	396.8	398.5	398.8	399.8	401.5
7.5°	391.3	390.6	390.9	392.0	392.7	393.3	394.0	395.4	396.4	398.8	400.2
10°	394.0	393.7	394.0	394.7	394.7	395.1	394.4	395.7	396.4	398.5	399.8
12.5°	405.3	405.3	404.6	404.6	403.9	403.3	401.5	400.5	400.2	400.5	401.2
15°	423.4	422.8	421.4	420.4	419.0	416.6	414.2	412.2	410.8	408.7	408.0
17.5°	441.2	440.2	438.8	437.5	435.8	433.4	429.6	427.2	423.4	421.0	419.7
20°	461.7	459.7	458.0	456.3	452.9	452.2	448.4	444.3	439.9	434.4	433.7
22.5°	488.4	485.0	483.0	481.9	478.5	477.5	471.3	465.5	460.0	452.9	451.1
25°	515.4	512.0	511.0	509.6	507.2	505.9	500.1	493.6	486.4	476.5	474.4
27.5°	541.8	542.1	539.4	540.4	539.7	537.3	531.5	525.0	519.6	507.9	505.5
30°	574.6	572.6	571.2	573.3	570.9	571.2	566.1	562.6	553.8	546.9	542.1
32.5°	608.8	608.5	610.5	611.9	611.6	610.9	606.8	603.4	595.5	585.6	583.5
35°	655.7	657.7	659.4	665.6	665.6	670.0	665.9	661.8	652.6	640.6	636.5
37.5°	687.5	688.2	695.0	703.2	713.5	723.1	725.8	726.8	723.1	714.2	708.0
40°	716.6	717.9	728.9	741.5	756.6	775.4	786.7	791.8	792.8	788.7	775.4
42.5°	745.6	747.7	759.0	777.4	798.3	822.3	842.1	854.7	861.9	861.9	854.1
45°	779.5	782.2	794.5	814.7	839.0	869.1	896.5	920.8	932.4	933.1	925.5
47.5°	819.5	821.9	836.3	856.8	881.8	912.2	946.8	974.5	996.0	997.4	991.2
50°	871.2	874.6	886.6	905.0	930.7	961.5	996.0	1034.7	1057.2	1062.7	1056.2
52.5°	939.6	940.3	950.2	967.3	992.2	1021.7	1058.3	1100.3	1130.1	1134.5	1123.9
55°	1034.0	1032.9	1039.4	1057.9	1076.7	1099.6	1137.6	1184.8	1218.0	1224.8	1213.9
57.5°	1162.2	1161.2	1166.7	1171.1	1206.4	1228.6	1265.9	1311.0	1343.2	1363.0	1344.2
60°	1361.0	1359.9	1368.8	1394.8	1421.2	1453.6	1489.9	1543.9	1589.1	1594.9	1576.4
62.5°	1505.0	1510.1	1529.6	1560.0	1613.4	1677.0	1743.4	1814.5	1907.2	1936.6	1927.7
65°	1454.7	1464.9	1492.0	1538.1	1609.3	1697.2	1801.2	1930.1	2054.3	2123.7	2121.6
66°	1409.5	1420.8	1454.0	1498.5	1573.7	1669.8	1783.4	1923.9	2062.8	2139.4	2144.2
67.5°	1327.4	1340.1	1372.6	1425.3	1498.5	1600.7	1722.8	1875.7	2032.7	2122.0	2134.6
70°	1167.7	1182.1	1205.7	1249.1	1321.3	1412.6	1541.2	1678.0	1842.5	1944.8	1960.2
72.5°	976.2	988.8	1015.2	1050.7	1109.9	1167.4	1268.3	1369.2	1486.8	1603.5	1592.2
75°	700.8	706.3	722.0	760.7	792.5	844.1	925.2	1008.0	1088.4	1141.7	1149.2
77.5°	364.3	378.6	400.9	443.6	478.2	524.7	577.4	639.6	698.4	747.3	734.0
80°	238.4	244.6	264.4	286.3	311.6	341.4	376.6	399.8	407.4	404.3	407.4
82.5°	137.5	148.8	175.1	191.9	210.7	221.0	249.0	275.7	290.7	271.9	265.1
85°	17.4	22.6	71.1	89.6	102.6	118.0	126.6	142.6	133.1	119.0	145.0
87.5°	3.8	3.4	4.8	10.3	10.6	8.9	16.8	17.8	10.9	5.5	6.8
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7
2.5°	404.6	405.0	405.7	406.7	407.4	408.0	408.7	409.8	410.4	411.1	412.5
5°	402.9	404.3	405.7	407.0	408.7	411.5	413.2	414.5	415.9	418.7	419.7
7.5°	401.9	404.3	406.3	408.7	411.5	413.9	416.9	418.7	420.7	422.4	424.5
10°	401.2	404.6	406.7	410.1	413.2	415.6	419.0	421.0	423.4	425.5	426.5
12.5°	402.6	404.3	406.3	409.8	413.5	416.9	420.7	422.4	424.5	426.2	426.5
15°	408.4	408.4	408.7	411.5	415.2	418.0	421.0	422.8	423.8	424.8	424.8
17.5°	419.0	416.6	414.9	415.2	417.6	419.3	421.0	421.0	420.4	420.0	419.3
20°	431.3	428.2	424.8	422.4	421.7	420.4	419.3	415.9	413.2	410.8	409.1
22.5°	449.1	444.3	439.5	435.1	431.0	425.8	420.0	413.2	406.7	402.2	399.5
25°	471.0	467.2	461.4	454.6	449.4	439.9	432.3	422.4	414.2	408.4	403.6
27.5°	502.1	497.7	492.2	486.0	478.5	467.9	458.7	447.0	437.1	428.6	422.4
30°	540.8	534.9	530.8	523.3	518.2	506.2	497.0	482.6	463.5	449.8	441.2
32.5°	580.4	573.9	570.5	564.7	558.9	551.7	537.7	515.4	490.8	468.6	453.9
35°	633.4	626.6	620.5	615.3	606.8	593.4	581.1	554.4	520.6	489.5	464.8
37.5°	700.1	688.9	673.5	660.5	645.4	626.3	607.5	580.1	541.4	501.1	468.2
40°	771.3	751.5	729.6	705.3	679.3	651.6	630.0	602.3	558.9	511.0	465.9
42.5°	845.5	814.0	783.6	749.4	713.1	680.3	652.3	621.8	571.9	513.7	456.3
45°	919.0	883.8	837.6	792.8	747.0	706.3	674.8	640.6	583.9	514.8	443.6
47.5°	979.9	943.7	891.0	834.9	780.5	734.3	697.4	660.5	599.9	521.9	440.5
50°	1044.2	1000.1	941.6	875.3	813.7	762.1	722.7	684.4	622.5	540.4	450.5
52.5°	1114.4	1063.7	995.3	921.1	853.7	795.9	753.2	713.8	651.2	566.4	469.3
55°	1199.9	1138.0	1063.7	979.9	907.8	843.8	796.6	750.1	685.4	597.2	492.9
57.5°	1330.5	1254.6	1171.1	1075.7	995.7	920.1	863.6	809.9	738.5	643.0	525.0
60°	1566.9	1485.8	1377.4	1261.8	1167.7	1079.5	996.7	930.0	842.1	733.3	596.2
62.5°	1905.5	1797.7	1653.1	1491.3	1368.1	1240.9	1147.5	1048.3	939.2	821.9	680.0
65°	2093.6	1962.9	1769.3	1581.6	1423.2	1285.0	1166.3	1051.4	930.3	818.1	699.5
66°	2116.9	1980.7	1779.6	1581.9	1415.7	1273.7	1148.9	1029.9	906.1	799.0	691.3
67.5°	2107.3	1968.1	1760.8	1552.2	1383.2	1230.6	1101.7	978.2	854.7	754.9	663.9
70°	1950.3	1818.3	1614.7	1412.6	1252.2	1101.7	978.6	857.1	743.9	658.4	591.4
72.5°	1619.5	1506.7	1329.8	1171.1	1045.3	921.1	816.8	700.8	605.1	541.8	502.1
75°	1169.1	1100.7	939.6	848.6	738.1	655.7	554.4	485.7	416.9	386.2	379.3
77.5°	738.5	646.4	544.2	448.1	368.4	305.4	237.7	201.8	168.3	164.9	199.1
80°	373.8	336.6	259.3	206.6	173.8	140.6	111.2	84.1	58.8	70.8	84.8
82.5°	244.9	204.2	160.1	131.7	114.6	95.1	73.9	51.3	37.6	42.4	58.1
85°	132.4	112.9	91.0	71.8	58.1	52.0	34.9	24.6	24.3	26.0	33.2
87.5°	9.6	9.6	7.5	6.8	8.2	6.8	6.2	6.2	5.8	6.2	8.2
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7
2.5°	413.2	414.2	414.5	416.3	417.3	418.0	418.7	418.7	419.0	420.0	420.4
5°	421.0	422.8	424.8	426.2	426.9	428.9	429.6	429.6	430.3	431.6	432.7
7.5°	425.8	428.2	430.3	431.0	432.3	433.0	434.0	434.7	434.7	436.1	436.8
10°	427.5	428.9	431.0	431.0	432.3	432.3	433.4	433.7	433.7	435.1	436.1
12.5°	427.5	428.2	429.9	429.9	431.0	431.3	432.7	433.7	434.0	435.8	437.1
15°	425.5	426.2	427.5	427.9	430.3	431.6	434.7	436.8	436.8	438.5	439.2
17.5°	419.7	421.4	424.1	426.9	431.3	434.4	438.1	439.9	438.5	437.5	436.4
20°	410.1	413.2	419.7	426.5	434.4	438.5	440.5	438.8	434.0	429.3	426.2
22.5°	400.5	406.7	417.6	427.9	436.8	439.5	438.5	432.3	424.5	418.7	414.5
25°	405.0	412.2	422.8	432.0	437.8	437.1	433.0	424.5	415.9	408.4	401.5
27.5°	423.4	431.3	437.1	440.2	439.5	434.7	428.2	418.7	408.4	398.5	388.9
30°	440.9	445.0	446.4	444.0	438.5	430.6	422.4	411.5	397.8	385.5	374.5
32.5°	448.8	444.6	438.1	431.6	422.8	415.9	404.6	392.7	375.6	360.8	349.9
35°	448.8	432.3	415.9	402.2	388.9	380.3	367.3	351.3	335.5	323.2	314.7
37.5°	438.8	407.4	380.3	358.1	341.4	332.1	312.6	298.3	284.9	280.8	275.3
40°	420.7	374.2	335.2	306.1	284.9	271.2	251.7	241.8	236.7	234.6	233.6
42.5°	396.4	337.2	285.3	249.3	226.4	211.0	198.0	191.9	191.5	191.2	191.2
45°	370.4	297.6	236.7	193.9	173.8	160.1	153.9	151.5	153.6	153.2	153.6
47.5°	354.3	267.5	192.2	146.7	131.3	122.4	119.4	120.4	122.1	121.4	121.4
50°	352.3	252.1	162.5	114.2	102.6	98.2	97.5	97.5	98.5	97.8	97.5
52.5°	359.8	249.7	147.1	98.2	88.9	85.2	84.5	84.1	83.8	81.7	80.0
55°	372.8	255.2	142.6	94.1	84.5	80.4	79.4	78.7	77.3	74.6	71.5
57.5°	398.8	272.3	146.7	96.1	85.9	82.4	81.4	81.4	78.7	74.2	69.8
60°	461.4	315.7	163.5	104.0	92.3	88.9	89.6	89.3	85.2	78.7	71.8
62.5°	542.1	372.5	185.4	114.9	100.6	99.9	103.3	102.6	95.8	85.9	75.9
65°	579.4	399.2	191.5	117.3	102.3	105.3	112.2	111.5	103.0	89.3	76.6
66°	580.1	399.2	188.8	115.3	99.9	103.6	110.5	110.1	101.6	87.9	75.2
67.5°	566.1	388.2	180.9	111.2	95.1	97.8	104.0	103.6	95.8	84.5	72.5
70°	513.4	347.5	160.8	104.0	88.6	87.2	89.3	87.9	82.8	74.9	66.7
72.5°	439.9	291.8	140.2	98.5	84.1	78.7	77.3	76.3	72.2	67.7	62.6
75°	346.5	230.9	123.1	94.4	80.0	72.9	70.5	69.1	66.4	63.3	59.2
77.5°	213.8	165.2	107.4	88.9	77.0	69.8	68.1	66.0	61.9	58.1	55.1
80°	95.4	102.3	88.2	77.6	68.7	62.3	59.5	56.4	52.3	49.9	48.2
82.5°	63.6	66.0	64.0	58.1	52.0	46.9	42.8	42.8	42.1	40.0	39.3
85°	40.7	41.0	39.7	35.9	33.5	30.4	28.7	29.1	30.4	30.1	29.8
87.5°	9.2	9.2	10.9	10.3	12.0	12.7	13.7	14.7	16.8	16.8	17.8
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: P156611

CATALOG NUMBER: TLM-E01-LED-E1-T4-7050

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	408.7	408.7	408.7	408.7	408.7
2.5°	420.7	421.4	422.1	421.0	421.4
5°	432.7	432.3	434.0	433.0	433.7
7.5°	436.4	436.8	438.1	438.1	438.5
10°	436.8	437.5	439.2	440.2	440.9
12.5°	438.5	439.9	442.6	443.3	443.3
15°	439.9	440.5	442.3	442.9	443.6
17.5°	435.1	433.7	434.4	434.7	434.4
20°	423.1	421.7	421.4	420.0	420.7
22.5°	410.1	406.3	403.9	401.2	401.2
25°	394.4	388.6	383.8	379.0	380.0
27.5°	379.7	372.1	367.3	364.3	363.6
30°	365.3	357.4	353.0	349.2	349.2
32.5°	341.4	335.9	330.1	327.7	327.3
35°	308.2	304.8	300.0	298.9	297.2
37.5°	270.9	269.9	265.8	265.4	263.7
40°	231.9	232.6	231.2	230.5	229.5
42.5°	192.9	196.3	195.6	195.3	194.6
45°	155.6	158.0	158.4	159.4	161.1
47.5°	122.4	123.1	123.8	123.5	123.8
50°	95.8	94.1	93.7	92.7	93.7
52.5°	77.3	74.6	73.2	71.8	71.1
55°	68.1	65.3	64.0	63.3	62.6
57.5°	65.7	62.9	60.9	59.5	59.2
60°	66.4	62.3	59.5	57.8	57.5
62.5°	68.1	62.6	58.8	57.1	56.8
65°	67.7	61.9	58.5	56.4	56.1
66°	66.7	61.2	57.8	56.1	55.8
67.5°	65.0	60.2	57.1	55.8	55.1
70°	61.9	58.8	56.4	54.7	54.0
72.5°	59.2	56.8	54.7	53.0	52.7
75°	56.1	54.0	52.0	50.6	50.3
77.5°	52.3	50.3	48.9	47.9	47.5
80°	46.2	44.8	43.4	42.1	42.1
82.5°	38.3	37.3	35.9	34.9	34.5
85°	29.4	29.4	28.4	27.4	27.0
87.5°	17.4	17.1	17.1	16.1	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)