

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: P147355

Luminaire Tested: **TLM-F04-LED-E1-5MQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P147355  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33674)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TLM-F04-LED-E1-5MQ  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (28) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

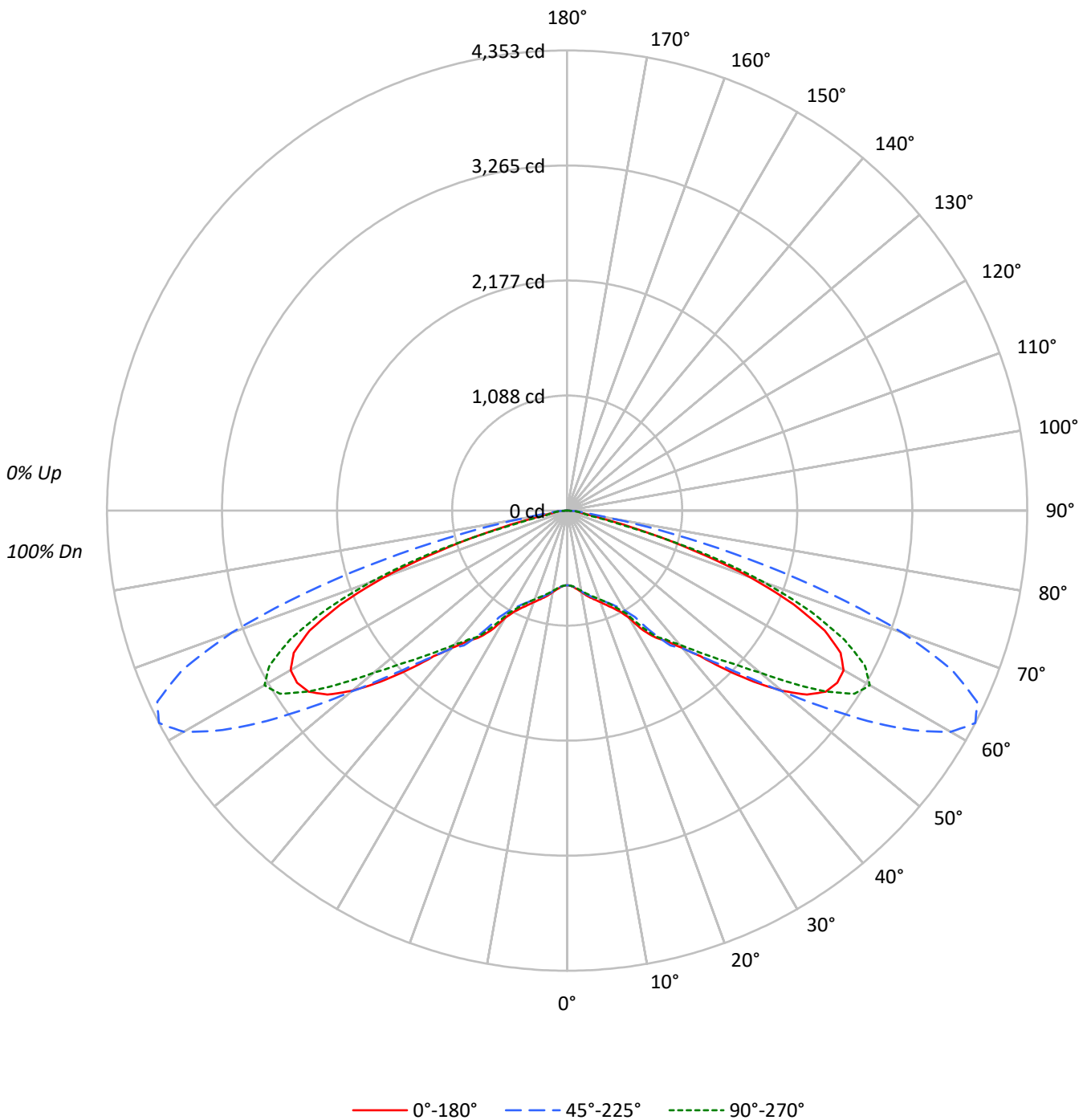
Lumens per Lamp: N/A  
Luminaire Lumens: 10645.2 lumens  
Efficiency: N/A  
Efficacy: 104.2 lumens/watt  
Spacing Criteria (0/90/45): 3.55 / 3.67 / 3.6  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 102.2  
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



TEST NUMBER: P147355  
CATALOG NUMBER: TLM-F04-LED-E1-5MQ

### Luminous Intensity Polar Plot





TEST NUMBER: P147355

CATALOG NUMBER: TLM-F04-LED-E1-5MQ

**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	106	100	94	90	103	97	93	88	93	89	85	89	86	83	85	83	80	78
2	93	82	73	66	90	80	72	65	76	70	64	73	67	62	70	65	61	58
3	82	68	58	50	79	67	57	49	63	55	48	60	53	47	57	51	46	44
4	73	57	46	38	70	56	46	38	53	44	37	51	43	36	48	41	36	33
5	65	49	38	30	63	48	37	30	46	36	29	43	35	29	41	34	28	26
6	59	43	32	24	57	42	31	24	40	30	23	38	29	23	36	29	23	20
7	54	37	27	20	52	37	27	19	35	26	19	33	25	19	32	24	19	16
8	49	33	23	16	47	33	23	16	31	22	16	30	22	16	28	21	16	13
9	46	30	20	14	44	29	20	14	28	20	14	27	19	14	26	19	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°	45°	90°
0°	11352	11352	11352
5°	11734	11671	11645
10°	12767	12631	12569
15°	14171	13905	13767
20°	15751	15375	15243
25°	17980	17248	17384
30°	21716	20254	20950
35°	28830	27773	28473
40°	35548	35653	34742
45°	48430	47053	44690
50°	66233	66575	59670
55°	83659	97193	83549
60°	97029	134533	106206
65°	102179	162644	110044
70°	86683	158546	93170
75°	43966	111296	38193
80°	13952	38645	14053
85°	15115	20092	15429



TEST NUMBER: P147355

CATALOG NUMBER: TLM-F04-LED-E1-5MQ

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.8	0.7
10°-20°	239.4	2.2
20°-30°	462.8	4.3
30°-40°	896.1	8.4
40°-50°	1618.1	15.2
50°-60°	2813.6	26.4
60°-70°	3194.2	30.0
70°-80°	1238.4	11.6
80°-90°	111.7	1.0
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°	773.0	7.3
0°-40°	1669.2	15.7
0°-60°	6100.9	57.3
0°-90°	10645.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10645.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	707	707	707	707	707	
5°	728	726	724	723	722	71
15°	852	846	836	830	828	243
25°	1014	994	973	974	981	478
35°	1470	1442	1416	1441	1452	918
45°	2132	2083	2071	1990	1967	1670
55°	2987	3130	3470	3088	2983	2630
65°	2688	3086	4278	3321	2895	2563
75°	708	991	1793	938	615	858
85°	82	118	109	118	84	80
90°	0	0	0	0	0	



TEST NUMBER: P147355

CATALOG NUMBER: TLM-F04-LED-E1-5MQ

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	706.6	706.6	706.6	706.6	706.6	706.6	706.6	706.6	706.6	706.6	706.6
2.5°	711.0	713.2	712.7	711.6	711.6	711.6	711.0	709.4	708.8	710.0	711.0
5°	727.6	727.6	727.6	727.6	726.4	726.4	725.4	724.2	724.8	723.7	723.2
7.5°	752.8	751.2	751.2	750.6	750.6	749.6	747.9	745.7	746.2	745.8	745.2
10°	782.6	783.2	781.5	783.2	780.4	779.8	777.7	776.6	776.0	774.3	774.4
12.5°	818.4	816.8	816.8	815.6	814.6	813.4	810.1	809.6	807.4	806.2	804.6
15°	852.0	851.4	849.2	847.0	846.4	845.4	841.5	839.3	838.8	836.0	833.8
17.5°	885.5	884.4	881.6	880.6	878.4	876.7	873.4	870.1	868.4	867.4	864.6
20°	921.3	920.2	917.4	915.2	912.5	910.3	905.3	902.6	901.0	899.3	897.0
22.5°	965.9	963.7	959.2	955.4	949.4	947.2	940.6	936.7	934.0	931.8	930.6
25°	1014.3	1014.8	1008.8	1003.8	996.7	990.6	982.4	978.0	975.2	973.0	972.4
27.5°	1074.8	1075.4	1069.8	1062.7	1051.7	1045.1	1034.1	1028.6	1027.0	1024.8	1024.2
30°	1170.6	1165.6	1156.3	1144.7	1134.8	1120.5	1104.6	1099.0	1093.5	1091.8	1091.8
32.5°	1346.7	1344.0	1336.2	1307.6	1294.4	1264.7	1236.6	1220.7	1202.5	1193.7	1188.2
35°	1470.0	1468.9	1462.8	1453.0	1444.7	1438.6	1422.2	1419.4	1416.0	1416.1	1420.4
37.5°	1560.8	1554.2	1553.1	1554.7	1552.5	1553.6	1566.9	1585.0	1600.4	1608.1	1607.0
40°	1695.0	1685.7	1691.2	1687.4	1682.4	1681.3	1685.7	1692.8	1700.0	1700.0	1698.4
42.5°	1870.6	1875.0	1877.2	1861.3	1850.8	1848.1	1858.6	1856.4	1863.5	1860.8	1853.6
45°	2131.6	2128.8	2125.0	2105.6	2089.2	2076.0	2078.7	2074.9	2075.4	2071.0	2065.4
47.5°	2394.6	2403.9	2388.0	2378.6	2359.9	2350.6	2358.2	2351.6	2364.3	2341.2	2330.2
50°	2650.0	2656.6	2651.0	2637.8	2637.8	2651.0	2660.4	2672.5	2690.1	2663.7	2624.0
52.5°	2859.0	2864.6	2872.8	2883.8	2910.8	2938.9	2978.5	3020.8	3054.5	3049.5	3004.4
55°	2986.8	2993.4	3007.1	3045.1	3093.5	3167.2	3257.0	3355.5	3432.5	3470.0	3437.0
57.5°	3029.6	3034.6	3072.0	3117.8	3193.1	3302.6	3452.9	3623.0	3771.0	3865.1	3850.2
60°	3019.8	3019.8	3057.8	3120.5	3226.2	3371.4	3583.8	3819.4	4046.2	4187.0	4166.2
62.5°	2915.8	2921.2	2975.8	3051.1	3178.8	3352.8	3605.8	3907.0	4178.2	4353.3	4336.2
65°	2687.9	2691.8	2750.6	2840.4	2982.9	3188.8	3465.6	3799.1	4110.0	4278.5	4246.5
67.5°	2319.8	2323.6	2371.4	2472.8	2623.6	2838.7	3137.6	3504.6	3809.0	3942.2	3846.4
70°	1845.4	1856.4	1887.2	1994.5	2109.0	2319.7	2594.9	2962.0	3249.2	3375.3	3269.6
72.5°	1257.6	1285.6	1323.0	1418.2	1527.8	1702.8	1921.8	2231.1	2461.7	2607.6	2513.4
75°	708.3	747.9	759.4	831.6	921.8	1060.0	1220.2	1442.0	1674.7	1793.0	1679.6
77.5°	306.0	338.5	352.8	386.4	456.8	514.6	612.0	761.7	941.6	1024.8	888.8
80°	150.8	158.5	164.5	175.0	194.9	213.6	259.8	325.2	399.0	417.7	332.4
82.5°	116.7	122.2	132.6	140.9	145.8	150.8	155.2	164.0	171.1	175.0	165.1
85°	82.0	89.2	100.7	110.1	115.6	119.4	123.3	126.0	119.5	109.0	114.5
87.5°	21.5	28.0	39.1	42.4	47.8	50.6	49.5	51.2	46.2	33.6	37.4
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: P147355

CATALOG NUMBER: TLM-F04-LED-E1-5MQ

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	706.6	706.6	706.6	706.6	706.6	706.6	706.6	706.6
2.5°	710.5	709.9	710.5	710.5	710.5	710.0	710.0	710.0
5°	723.2	723.2	723.7	722.6	722.7	723.2	722.6	722.1
7.5°	744.6	744.1	744.1	743.6	744.1	743.6	743.6	743.0
10°	773.2	772.2	772.7	771.0	771.0	770.5	770.5	770.5
12.5°	804.0	802.4	803.0	801.3	798.6	799.1	799.6	799.1
15°	833.8	832.1	830.4	829.4	827.7	828.2	828.2	827.7
17.5°	864.0	860.8	860.2	858.6	858.0	858.0	858.0	858.5
20°	895.4	893.2	892.7	891.0	890.5	892.2	892.7	891.6
22.5°	929.0	927.9	929.0	927.9	929.6	930.6	931.2	930.1
25°	971.4	970.2	971.9	975.8	978.0	979.0	981.8	980.7
27.5°	1025.8	1024.8	1028.6	1034.1	1037.4	1042.9	1045.7	1046.8
30°	1096.3	1101.2	1103.4	1114.4	1116.6	1125.4	1125.4	1129.3
32.5°	1198.6	1208.0	1224.5	1241.6	1265.2	1282.3	1282.3	1291.1
35°	1423.2	1427.0	1439.8	1442.5	1447.4	1452.9	1447.4	1451.8
37.5°	1595.4	1578.4	1566.3	1549.2	1538.8	1538.8	1539.9	1538.8
40°	1683.6	1677.0	1671.4	1657.1	1654.9	1654.4	1654.4	1656.6
42.5°	1840.9	1825.0	1816.2	1804.0	1800.2	1799.1	1798.6	1799.6
45°	2045.6	2019.8	1996.1	1984.0	1973.6	1963.6	1967.0	1967.0
47.5°	2284.0	2243.8	2205.2	2184.4	2166.2	2157.9	2152.4	2150.8
50°	2574.0	2517.8	2468.4	2429.2	2402.8	2402.3	2405.0	2387.4
52.5°	2929.5	2840.9	2779.2	2726.4	2701.7	2698.9	2690.1	2680.2
55°	3323.6	3218.4	3116.6	3060.0	3027.5	3009.8	2999.4	2982.9
57.5°	3729.7	3588.2	3441.9	3351.0	3293.8	3254.2	3233.3	3224.0
60°	4042.9	3849.7	3656.6	3510.7	3415.5	3356.6	3320.2	3305.4
62.5°	4166.2	3904.2	3656.6	3465.0	3327.4	3246.0	3197.0	3175.5
65°	4019.2	3708.8	3427.0	3215.7	3062.1	2971.4	2918.0	2894.8
67.5°	3608.6	3334.6	3028.0	2817.8	2659.9	2570.1	2512.4	2495.3
70°	3025.2	2745.1	2452.4	2264.7	2123.8	2050.6	1990.6	1983.5
72.5°	2273.5	2031.9	1780.9	1625.7	1512.4	1391.2	1360.4	1375.9
75°	1457.4	1231.1	1007.7	867.9	764.4	648.8	604.3	615.3
77.5°	690.2	534.4	385.8	298.3	250.4	214.0	204.7	199.2
80°	255.9	207.5	183.2	173.9	167.3	161.2	156.8	151.9
82.5°	165.6	161.8	156.8	155.2	150.2	142.6	128.2	122.2
85°	123.8	123.8	117.2	117.8	114.0	104.0	90.8	83.7
87.5°	36.3	32.4	29.7	27.5	27.0	24.2	17.6	15.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)