

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: P147873

Luminaire Tested: **TLM-F04-LED-E1-5WQ-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P147873  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33675)  
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-E1-5WQ-8030  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE  
Light Source: (28) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

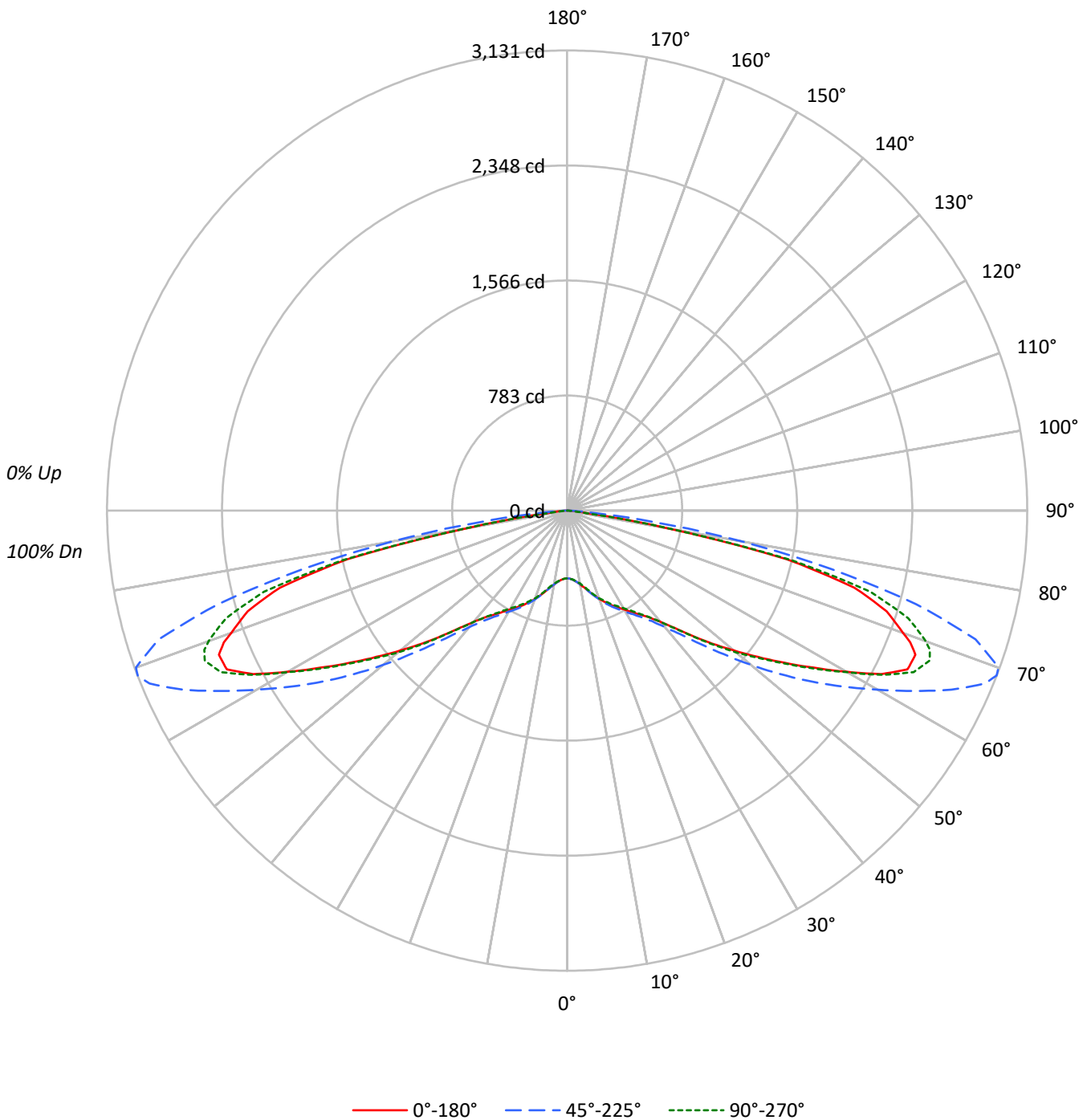
Lumens per Lamp: N/A  
Luminaire Lumens: 8873.1 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 3.9 / 3.92 / 3.98  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
CIE Type: Direct

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



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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	103	96	90	84	100	94	88	82	89	84	80	85	81	77	81	78	75	72
2	89	77	67	58	86	75	65	58	71	63	56	67	60	55	64	58	53	51
3	78	63	51	42	75	61	50	42	58	48	41	54	46	40	52	45	39	36
4	69	52	41	31	66	51	40	31	48	38	31	45	37	30	43	36	29	27
5	62	45	33	24	59	44	32	24	41	31	24	39	30	23	37	29	23	20
6	56	39	28	19	54	38	27	19	36	26	19	34	25	19	32	24	18	16
7	51	34	24	16	49	34	23	16	32	22	16	30	22	15	29	21	15	13
8	47	31	20	13	45	30	20	13	29	20	13	27	19	13	26	18	13	10
9	44	28	18	11	42	27	18	11	26	17	11	25	17	11	23	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°	45°	90°
0°	7403	7403	7403
5°	7641	7641	7610
10°	8320	8305	8228
15°	9440	9487	9347
20°	10926	11022	10832
25°	12580	12779	12400
30°	14407	14735	14234
35°	16945	17400	16798
40°	20710	21664	20710
45°	27355	29127	27460
50°	36988	40817	37498
55°	50557	56803	50843
60°	70444	78323	70714
65°	97149	109652	98845
70°	114153	146662	121922
75°	125591	152462	132568
80°	63513	111132	65410
85°	8221	30138	6341



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.3	0.5
10°-20°	163.4	1.8
20°-30°	330.8	3.7
30°-40°	554.7	6.3
40°-50°	978.4	11.0
50°-60°	1725.3	19.4
60°-70°	2634.1	29.7
70°-80°	2201.0	24.8
80°-90°	239.2	2.7
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°	540.5	6.1
0°-40°	1095.1	12.3
0°-60°	3798.8	42.8
0°-90°	8873.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8873.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	461	461	461	461	461	
5°	474	475	474	472	472	46
15°	568	570	570	565	562	164
25°	710	713	721	708	700	330
35°	864	870	887	868	856	549
45°	1204	1231	1282	1242	1209	946
55°	1805	1890	2028	1906	1815	1636
65°	2556	2694	2884	2715	2600	2446
75°	2023	2137	2456	2274	2136	1948
85°	45	74	164	65	34	147
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°	460.8	460.8	460.8	460.8	460.8	460.8	460.8	460.8	460.8	460.8	460.8
2.5°	464.5	465.4	464.5	464.5	464.5	464.5	464.5	463.6	463.6	463.6	464.5
5°	473.8	474.7	473.8	474.7	474.7	474.7	474.7	473.8	473.8	473.8	473.8
7.5°	488.6	488.6	488.6	489.6	488.6	488.6	489.6	488.6	488.6	488.6	488.6
10°	510.0	509.1	509.1	509.1	509.1	509.1	510.0	510.0	510.0	509.1	509.1
12.5°	536.0	535.1	536.0	536.0	537.0	537.0	537.0	537.0	537.0	537.0	536.0
15°	567.6	567.6	567.6	568.5	570.4	570.4	569.5	570.4	570.4	570.4	570.4
17.5°	602.9	604.8	602.9	603.8	604.8	603.8	605.7	606.6	607.6	606.6	603.8
20°	639.1	640.1	640.1	640.1	640.1	641.9	642.9	642.9	645.6	644.7	643.8
22.5°	673.5	675.4	675.4	676.3	676.3	679.1	679.1	679.1	680.9	682.8	680.9
25°	709.7	708.8	708.8	710.7	711.6	715.3	715.3	717.2	720.0	720.9	719.0
27.5°	742.3	741.3	741.3	744.1	745.0	749.7	749.7	753.4	755.3	756.2	754.3
30°	776.6	776.6	775.7	778.5	781.3	785.0	786.8	790.6	793.3	794.3	792.4
32.5°	817.5	815.6	816.6	818.4	820.3	824.0	826.8	831.4	835.2	836.1	834.2
35°	864.0	861.2	862.1	864.0	866.7	872.3	877.0	879.7	885.3	887.2	883.5
37.5°	915.0	916.0	915.0	919.7	924.3	930.8	936.4	940.1	945.7	948.5	945.7
40°	987.5	984.7	987.5	992.2	999.6	1007.9	1019.1	1021.9	1027.5	1033.0	1026.5
42.5°	1081.3	1079.5	1086.0	1089.7	1098.1	1107.3	1121.3	1128.7	1137.1	1140.8	1135.2
45°	1204.0	1204.0	1211.4	1212.3	1225.3	1237.4	1256.9	1266.2	1282.0	1282.0	1282.0
47.5°	1339.6	1345.2	1349.8	1359.1	1368.4	1390.7	1410.2	1430.6	1445.5	1447.4	1444.6
50°	1479.9	1485.4	1499.4	1512.4	1532.8	1560.7	1582.1	1609.0	1622.0	1633.1	1629.4
52.5°	1635.0	1635.9	1652.7	1669.4	1699.1	1729.8	1764.1	1792.0	1815.2	1825.4	1817.1
55°	1805.0	1806.9	1821.7	1839.4	1872.8	1908.1	1950.9	1979.7	2009.4	2028.0	2014.0
57.5°	1988.9	1989.9	2004.7	2026.1	2066.1	2101.4	2142.2	2183.1	2211.0	2227.7	2218.4
60°	2192.4	2197.0	2208.2	2235.1	2273.2	2310.4	2351.3	2387.5	2420.0	2437.6	2428.4
62.5°	2409.8	2414.4	2430.2	2451.6	2485.0	2525.9	2564.9	2611.4	2638.3	2657.8	2643.9
65°	2555.6	2564.0	2589.1	2617.9	2667.1	2720.1	2765.6	2828.7	2861.3	2884.5	2871.5
67.5°	2564.9	2569.6	2600.2	2643.9	2709.8	2789.7	2882.6	2981.1	3045.2	3075.9	3053.6
69°	2501.7	2508.2	2538.0	2587.2	2660.6	2753.5	2864.0	2986.7	3085.1	3130.7	3109.3
70°	2430.2	2444.1	2476.7	2530.5	2602.1	2699.6	2813.9	2944.9	3060.1	3122.3	3106.5
72.5°	2279.7	2283.4	2304.8	2347.5	2402.3	2483.2	2590.9	2714.5	2824.1	2913.3	2926.3
75°	2023.3	2035.4	2051.2	2080.0	2107.9	2166.4	2238.8	2323.4	2387.5	2456.2	2459.0
77.5°	1529.1	1565.3	1577.4	1583.9	1596.0	1642.4	1705.6	1779.0	1832.0	1843.1	1841.2
80°	686.5	734.8	746.0	798.9	831.4	908.5	1005.2	1117.6	1192.8	1201.2	1180.7
82.5°	134.7	144.0	168.1	209.9	286.1	331.6	394.8	473.8	546.2	588.0	563.0
85°	44.6	47.4	54.8	60.4	69.7	79.0	95.7	118.9	147.7	163.5	145.8
87.5°	17.7	17.7	20.4	22.3	24.2	24.2	24.2	22.3	21.4	17.7	15.8
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	460.8	460.8	460.8	460.8	460.8	460.8	460.8	460.8
2.5°	463.6	463.6	463.6	463.6	463.6	463.6	463.6	463.6
5°	473.8	472.9	472.9	471.9	471.9	471.9	471.9	471.9
7.5°	487.7	486.8	485.9	486.8	485.9	485.9	485.9	485.9
10°	509.1	507.2	506.3	505.4	505.4	505.4	504.4	504.4
12.5°	534.2	534.2	533.2	532.3	530.4	531.4	530.4	528.6
15°	568.5	566.7	565.7	564.8	563.0	563.0	563.0	562.0
17.5°	602.9	601.1	601.1	598.3	597.3	597.3	597.3	598.3
20°	641.0	638.2	636.4	634.5	632.6	633.6	631.7	633.6
22.5°	679.1	675.4	673.5	670.7	667.9	667.9	667.0	665.2
25°	716.2	711.6	709.7	707.0	703.2	703.2	701.4	699.5
27.5°	751.5	746.9	745.0	739.5	735.8	734.8	733.0	732.0
30°	790.6	785.0	782.2	776.6	771.1	770.1	767.3	767.3
32.5°	831.4	825.9	824.0	815.6	811.0	811.0	809.1	807.3
35°	882.5	874.2	872.3	864.0	857.4	857.4	855.6	856.5
37.5°	942.9	936.4	929.9	923.4	916.0	915.0	913.2	911.3
40°	1023.7	1016.3	1008.9	999.6	993.1	991.2	988.4	987.5
42.5°	1131.5	1124.1	1109.2	1101.8	1095.3	1089.7	1088.8	1087.8
45°	1269.0	1259.7	1249.5	1235.5	1227.2	1215.1	1213.2	1208.6
47.5°	1434.3	1416.7	1399.0	1387.0	1374.0	1360.0	1357.2	1349.8
50°	1609.9	1596.0	1566.3	1546.8	1526.3	1512.4	1503.1	1500.3
52.5°	1798.5	1772.5	1742.8	1716.8	1687.0	1668.4	1651.7	1647.1
55°	1995.5	1958.3	1921.1	1890.5	1860.7	1838.5	1822.7	1815.2
57.5°	2192.4	2151.5	2110.6	2077.2	2052.1	2023.3	2007.5	2003.8
60°	2397.7	2358.7	2316.9	2283.4	2252.8	2227.7	2218.4	2200.8
62.5°	2615.1	2574.2	2535.2	2502.7	2463.7	2446.0	2430.2	2420.0
65°	2828.7	2781.4	2732.1	2697.8	2658.7	2633.7	2614.2	2600.2
67.5°	2994.1	2922.6	2856.6	2799.0	2746.1	2707.0	2682.0	2669.0
69°	3040.6	2951.4	2866.8	2791.6	2729.3	2685.7	2657.8	2644.8
70°	3035.0	2936.5	2843.6	2760.9	2693.1	2646.7	2619.7	2595.6
72.5°	2863.1	2773.0	2669.9	2579.8	2518.5	2473.9	2446.9	2433.9
75°	2443.2	2382.8	2308.5	2238.8	2194.3	2168.2	2134.8	2135.7
77.5°	1779.0	1780.9	1730.7	1659.2	1609.0	1599.7	1584.8	1570.0
80°	1103.6	1015.4	957.8	880.7	824.0	774.8	753.4	707.0
82.5°	509.1	397.6	308.4	233.2	179.3	140.3	122.6	100.3
85°	113.3	86.4	71.5	57.6	49.2	45.5	37.2	34.4
87.5°	15.8	13.9	13.0	12.1	10.2	7.4	5.6	4.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)