

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: P147855

Luminaire Tested: **TLM-F02-LED-E1-5WQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P147855  
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-F02-LED-E1-5WQ  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE  
Light Source: (14) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

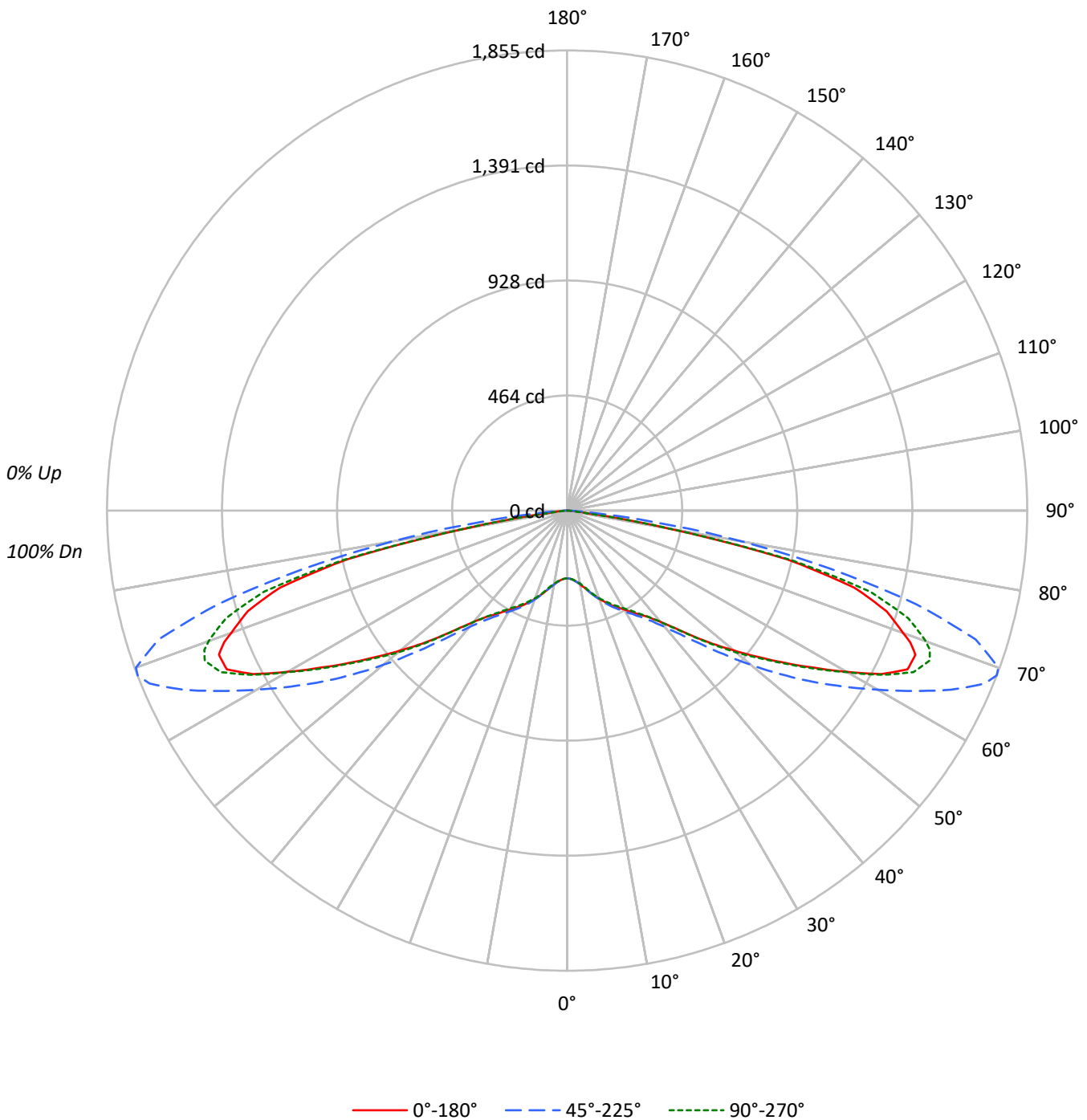
Lumens per Lamp: N/A  
Luminaire Lumens: 5256.6 lumens  
Efficiency: N/A  
Efficacy: 95.6 lumens/watt  
Spacing Criteria (0/90/45): 3.9 / 3.92 / 3.98  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 55  
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°	8905	8905	8905
5°	9191	9191	9155
10°	10006	9989	9897
15°	11356	11410	11245
20°	13142	13256	13027
25°	15134	15371	14914
30°	17329	17721	17122
35°	20379	20929	20204
40°	24909	26059	24909
45°	32904	35035	33028
50°	44488	49095	45102
55°	60809	68321	61155
60°	84728	94207	85054
65°	116851	131886	118889
70°	137302	176403	146648
75°	151067	183380	159461
80°	76394	133666	78667
85°	9880	36265	7635



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.4	0.5
10°-20°	96.8	1.8
20°-30°	196.0	3.7
30°-40°	328.6	6.3
40°-50°	579.6	11.0
50°-60°	1022.1	19.4
60°-70°	1560.5	29.7
70°-80°	1303.9	24.8
80°-90°	141.7	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°	320.2	6.1
0°-40°	648.8	12.3
0°-60°	2250.5	42.8
0°-90°	5256.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5256.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	273	273	273	273	273	
5°	281	281	281	280	280	27
15°	336	338	338	335	333	97
25°	420	423	427	420	414	195
35°	512	515	526	514	507	325
45°	713	730	760	736	716	560
55°	1069	1120	1201	1129	1075	969
65°	1514	1596	1709	1608	1540	1449
75°	1199	1266	1455	1347	1265	1154
85°	26	44	97	38	20	87
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°	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0
2.5°	275.2	275.7	275.2	275.2	275.2	275.2	275.2	274.6	274.6	274.6	275.2
5°	280.7	281.2	280.7	281.2	281.2	281.2	281.2	280.7	280.7	280.7	280.7
7.5°	289.5	289.5	289.5	290.0	289.5	289.5	290.0	289.5	289.5	289.5	289.5
10°	302.1	301.6	301.6	301.6	301.6	301.6	302.1	302.1	302.1	301.6	301.6
12.5°	317.6	317.0	317.6	317.6	318.1	318.1	318.1	318.1	318.1	318.1	317.6
15°	336.3	336.3	336.3	336.8	337.9	337.9	337.4	337.9	337.9	337.9	337.9
17.5°	357.2	358.3	357.2	357.7	358.3	357.7	358.8	359.4	359.9	359.4	357.7
20°	378.6	379.2	379.2	379.2	379.2	380.3	380.8	380.8	382.5	381.9	381.4
22.5°	399.0	400.1	400.1	400.7	400.7	402.3	402.3	402.3	403.4	404.5	403.4
25°	420.5	419.9	419.9	421.0	421.6	423.8	423.8	424.9	426.5	427.1	426.0
27.5°	439.7	439.2	439.2	440.8	441.4	444.1	444.1	446.3	447.4	448.0	446.9
30°	460.1	460.1	459.5	461.2	462.8	465.0	466.1	468.3	470.0	470.5	469.4
32.5°	484.3	483.2	483.8	484.9	486.0	488.2	489.8	492.6	494.8	495.3	494.2
35°	511.8	510.2	510.7	511.8	513.5	516.8	519.5	521.2	524.5	525.6	523.4
37.5°	542.1	542.6	542.1	544.8	547.6	551.5	554.8	557.0	560.3	561.9	560.3
40°	585.0	583.4	585.0	587.8	592.2	597.1	603.7	605.4	608.7	612.0	608.1
42.5°	640.6	639.5	643.4	645.6	650.5	656.0	664.3	668.7	673.6	675.8	672.5
45°	713.3	713.3	717.7	718.2	725.9	733.1	744.6	750.1	759.5	759.5	759.5
47.5°	793.6	796.9	799.7	805.2	810.7	823.9	835.4	847.5	856.3	857.4	855.8
50°	876.7	880.0	888.3	896.0	908.1	924.6	937.2	953.2	960.9	967.5	965.3
52.5°	968.6	969.2	979.1	989.0	1006.6	1024.8	1045.1	1061.6	1075.4	1081.4	1076.5
55°	1069.3	1070.4	1079.2	1089.7	1109.5	1130.4	1155.7	1172.8	1190.4	1201.4	1193.2
57.5°	1178.3	1178.8	1187.7	1200.3	1224.0	1244.9	1269.1	1293.3	1309.8	1319.7	1314.2
60°	1298.8	1301.6	1308.2	1324.1	1346.7	1368.7	1392.9	1414.4	1433.7	1444.1	1438.6
62.5°	1427.6	1430.4	1439.7	1452.4	1472.2	1496.4	1519.5	1547.0	1563.0	1574.6	1566.3
65°	1514.0	1519.0	1533.8	1550.9	1580.1	1611.4	1638.4	1675.8	1695.1	1708.8	1701.1
67.5°	1519.5	1522.3	1540.4	1566.3	1605.4	1652.7	1707.7	1766.1	1804.0	1822.2	1809.0
69°	1482.1	1485.9	1503.6	1532.7	1576.2	1631.2	1696.7	1769.4	1827.7	1854.7	1842.0
70°	1439.7	1448.0	1467.2	1499.2	1541.5	1599.3	1667.0	1744.6	1812.9	1849.7	1840.4
72.5°	1350.6	1352.8	1365.4	1390.7	1423.2	1471.1	1534.9	1608.1	1673.1	1725.9	1733.6
75°	1198.7	1205.8	1215.2	1232.2	1248.7	1283.4	1326.3	1376.4	1414.4	1455.1	1456.8
77.5°	905.9	927.3	934.5	938.3	945.5	973.0	1010.4	1053.9	1085.3	1091.9	1090.8
80°	406.7	435.3	441.9	473.3	492.6	538.2	595.5	662.1	706.6	711.6	699.5
82.5°	79.8	85.3	99.6	124.4	169.5	196.5	233.9	280.7	323.6	348.4	333.5
85°	26.4	28.1	32.5	35.8	41.3	46.8	56.7	70.4	87.5	96.9	86.4
87.5°	10.5	10.5	12.1	13.2	14.3	14.3	14.3	13.2	12.7	10.5	9.4
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°	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0
2.5°	274.6	274.6	274.6	274.6	274.6	274.6	274.6	274.6
5°	280.7	280.1	280.1	279.6	279.6	279.6	279.6	279.6
7.5°	288.9	288.4	287.8	288.4	287.8	287.8	287.8	287.8
10°	301.6	300.5	299.9	299.4	299.4	299.4	298.8	298.8
12.5°	316.5	316.5	315.9	315.4	314.2	314.8	314.2	313.1
15°	336.8	335.7	335.2	334.6	333.5	333.5	333.5	333.0
17.5°	357.2	356.1	356.1	354.4	353.9	353.9	353.9	354.4
20°	379.7	378.1	377.0	375.9	374.8	375.3	374.2	375.3
22.5°	402.3	400.1	399.0	397.4	395.7	395.7	395.2	394.1
25°	424.3	421.6	420.5	418.8	416.6	416.6	415.5	414.4
27.5°	445.2	442.5	441.4	438.1	435.9	435.3	434.2	433.7
30°	468.3	465.0	463.4	460.1	456.8	456.2	454.6	454.6
32.5°	492.6	489.3	488.2	483.2	480.5	480.5	479.4	478.3
35°	522.8	517.9	516.8	511.8	508.0	508.0	506.9	507.4
37.5°	558.6	554.8	550.9	547.0	542.6	542.1	541.0	539.9
40°	606.5	602.1	597.7	592.2	588.3	587.2	585.6	585.0
42.5°	670.3	665.9	657.1	652.7	648.9	645.6	645.0	644.5
45°	751.8	746.3	740.2	732.0	727.0	719.9	718.8	716.0
47.5°	849.7	839.3	828.8	821.7	814.0	805.7	804.1	799.7
50°	953.8	945.5	927.9	916.3	904.2	896.0	890.5	888.8
52.5°	1065.5	1050.1	1032.5	1017.0	999.4	988.4	978.5	975.8
55°	1182.2	1160.1	1138.1	1120.0	1102.4	1089.1	1079.8	1075.4
57.5°	1298.8	1274.6	1250.4	1230.6	1215.7	1198.7	1189.3	1187.1
60°	1420.5	1397.3	1372.6	1352.8	1334.6	1319.7	1314.2	1303.8
62.5°	1549.2	1525.0	1501.9	1482.6	1459.5	1449.1	1439.7	1433.7
65°	1675.8	1647.7	1618.6	1598.2	1575.1	1560.2	1548.7	1540.4
67.5°	1773.8	1731.4	1692.3	1658.2	1626.8	1603.7	1588.9	1581.2
69°	1801.3	1748.5	1698.4	1653.8	1616.9	1591.1	1574.6	1566.8
70°	1798.0	1739.7	1684.6	1635.6	1595.5	1567.9	1552.0	1537.7
72.5°	1696.2	1642.8	1581.7	1528.3	1492.0	1465.6	1449.6	1441.9
75°	1447.4	1411.6	1367.6	1326.3	1299.9	1284.5	1264.7	1265.3
77.5°	1053.9	1055.0	1025.3	982.9	953.2	947.7	938.9	930.1
80°	653.8	601.5	567.4	521.7	488.2	459.0	446.3	418.8
82.5°	301.6	235.5	182.7	138.1	106.2	83.1	72.6	59.4
85°	67.1	51.2	42.4	34.1	29.2	27.0	22.0	20.4
87.5°	9.4	8.3	7.7	7.2	6.1	4.4	3.3	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)