

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P412045

Luminaire Tested: **MRI-24ATR-40-L840-OPL**

Issue Date: 10/5/2020

Test Information

Test Method: LM-79-08
Report Number: P412045
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2008-915-3)
Test Lab: INNOVATION CENTER
Issue Date: 10/5/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MRI-24ATR-40-L840-OPL
Description: 2X4 TROFFER, 4000LM, OPAL LENS
Light Source: (1008) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4041.0 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

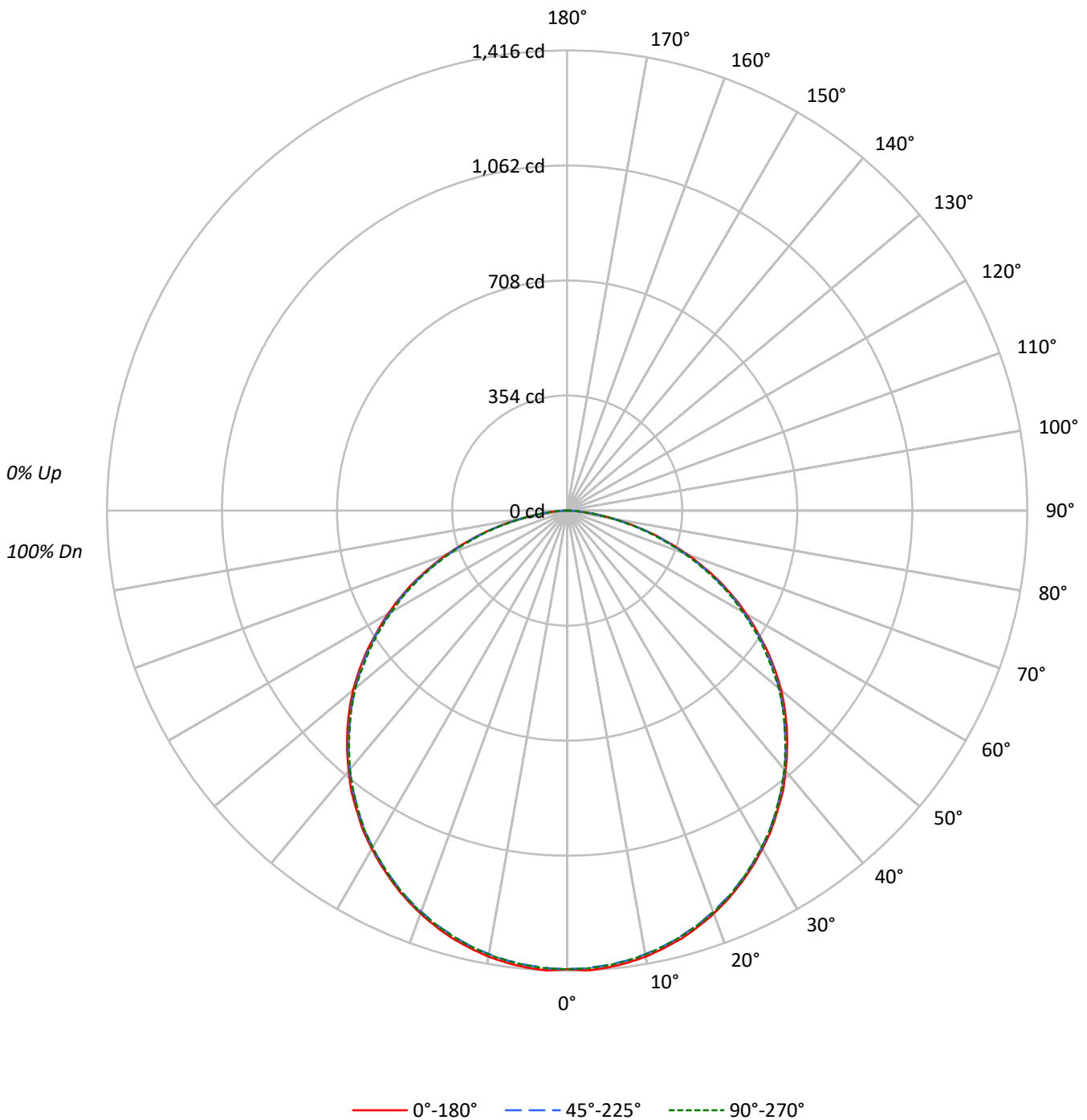
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	98	94	91		94	91	89		90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75		82	77	74		79	75	72	70
3	90	80	71	65	88	78	70	64	75	68	63		72	67	62		70	65	61	59
4	82	70	62	55	80	69	61	54	67	59	54		64	58	53		62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	46		58	51	46		56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	40		52	45	40		50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	36		46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26		37	31	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1899	1899	1899
5°	1907	1897	1898
10°	1904	1893	1896
15°	1898	1888	1889
20°	1889	1880	1883
25°	1879	1871	1872
30°	1867	1861	1859
35°	1853	1844	1844
40°	1836	1828	1827
45°	1819	1804	1802
50°	1800	1782	1780
55°	1763	1748	1734
60°	1715	1692	1679
65°	1652	1623	1614
70°	1547	1515	1497
75°	1382	1364	1340
80°	1113	1108	1103
85°	730	730	695



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	3.3
10°-20°	383.0	9.5
20°-30°	581.3	14.4
30°-40°	703.1	17.4
40°-50°	732.9	18.1
50°-60°	665.1	16.5
60°-70°	504.6	12.5
70°-80°	276.3	6.8
80°-90°	61.1	1.5
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°	1097.9	27.2
0°-40°	1801.0	44.6
0°-60°	3199.1	79.2
0°-90°	4041.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4041.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1411	1411	1411	1411	1411	
5°	1412	1407	1404	1402	1405	134
15°	1363	1359	1355	1354	1356	385
25°	1266	1262	1260	1258	1261	583
35°	1128	1125	1123	1120	1123	706
45°	956	952	948	948	947	738
55°	751	747	745	742	739	671
65°	519	515	510	508	507	511
75°	266	262	262	257	258	281
85°	47	46	47	47	45	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1411.2	1411.2	1411.2	1411.2	1411.2
2.5°	1416.4	1411.2	1408.9	1407.1	1410.0
5°	1411.7	1406.6	1404.3	1402.5	1405.4
7.5°	1404.3	1399.6	1396.8	1395.0	1397.9
10°	1393.9	1388.7	1385.8	1384.6	1387.5
12.5°	1378.9	1374.8	1372.5	1371.4	1373.1
15°	1362.7	1358.7	1355.2	1353.5	1356.4
17.5°	1342.5	1338.5	1336.2	1334.5	1337.4
20°	1319.5	1316.0	1313.1	1312.0	1315.4
22.5°	1294.1	1291.2	1288.9	1287.2	1290.6
25°	1265.8	1262.4	1260.1	1258.3	1261.2
27.5°	1234.7	1231.8	1229.5	1227.8	1230.1
30°	1201.8	1199.5	1197.8	1194.9	1196.6
32.5°	1167.8	1163.2	1161.5	1160.9	1162.6
35°	1128.0	1125.1	1122.8	1120.5	1122.8
37.5°	1090.5	1084.8	1082.5	1081.3	1081.9
40°	1045.5	1042.7	1040.9	1036.9	1040.4
42.5°	1001.7	999.4	995.4	993.6	993.6
45°	956.2	952.1	948.1	948.1	946.9
47.5°	908.9	906.0	901.4	899.6	900.2
50°	859.9	854.7	851.2	847.2	850.6
52.5°	806.8	802.8	799.3	795.8	793.5
55°	751.4	747.4	745.1	741.6	739.3
57.5°	693.2	692.6	688.6	684.5	682.8
60°	637.2	633.2	628.6	628.6	624.0
62.5°	578.4	575.0	572.7	567.5	568.6
65°	519.0	515.0	509.8	508.1	506.9
67.5°	454.4	452.1	447.5	443.5	444.1
70°	393.3	388.7	385.2	381.8	380.6
72.5°	328.1	325.3	322.9	319.5	316.6
75°	265.9	262.4	262.4	257.2	257.8
77.5°	204.7	203.0	200.1	198.4	196.7
80°	143.6	144.2	143.0	139.6	142.4
82.5°	92.8	91.1	90.0	90.0	89.4
85°	47.3	46.1	47.3	47.3	45.0
87.5°	14.4	16.1	16.7	16.7	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)