

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: P412167

Luminaire Tested: **MRI-4ASR-4-1000-L840-OPL**

Issue Date: 10/5/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P412167  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2006-829-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/5/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MRI-4ASR-4-1000-L840-OPL  
Description: 4 FT, 4 INCH CHANNEL, OPAL LENS  
Light Source: (336) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

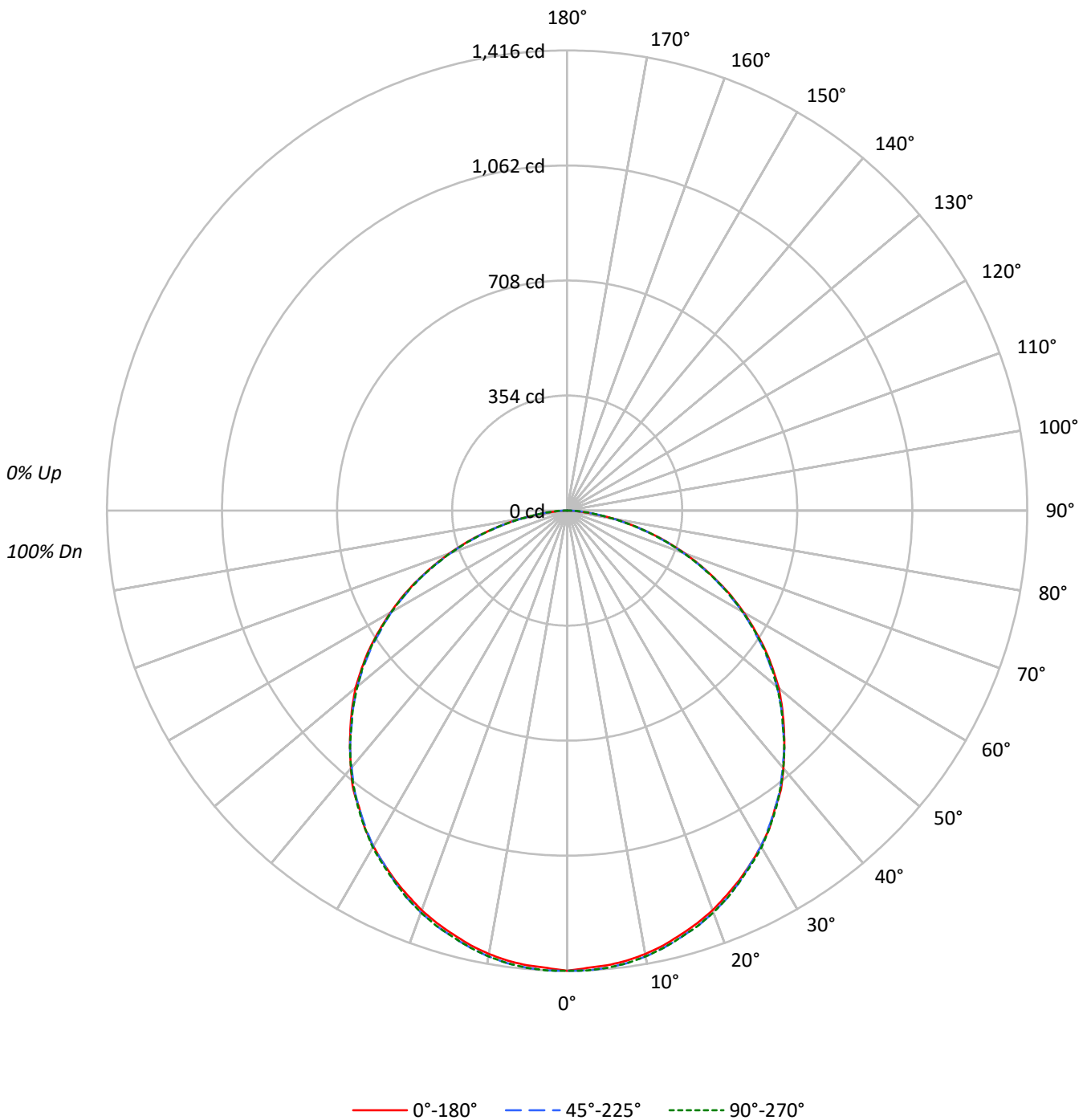
Lumens per Lamp: N/A  
Luminaire Lumens: 4018.0 lumens  
Efficiency: N/A  
Efficacy: 60.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.37  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.7  
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	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	41	52	45	40	51	45	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	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11434	11434	11434
5°	11384	11447	11447
10°	11358	11421	11421
15°	11290	11355	11355
20°	11241	11308	11308
25°	11176	11210	11210
30°	11122	11122	11157
35°	10999	10999	11038
40°	10910	10869	10910
45°	10765	10722	10722
50°	10682	10586	10586
55°	10455	10346	10400
60°	10128	10067	10067
65°	9704	9631	9631
70°	9085	8993	8993
75°	8163	8044	8044
80°	6797	6620	6620
85°	4279	4631	4993



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.1	3.3
10°-20°	383.3	9.5
20°-30°	579.7	14.4
30°-40°	699.3	17.4
40°-50°	726.4	18.1
50°-60°	657.9	16.4
60°-70°	498.6	12.4
70°-80°	274.7	6.8
80°-90°	64.2	1.6
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°	1097.1	27.3
0°-40°	1796.4	44.7
0°-60°	3180.6	79.2
0°-90°	4018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4018.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1416	1416	1416	1416	1416	
5°	1405	1409	1412	1416	1412	133
15°	1351	1355	1359	1362	1359	382
25°	1255	1255	1258	1258	1258	578
35°	1116	1116	1116	1116	1120	700
45°	943	939	939	943	939	728
55°	743	735	735	735	739	663
65°	508	504	504	504	504	502
75°	262	262	258	258	258	277
85°	46	50	50	54	54	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1416.3	1416.3	1416.3	1416.3	1416.3
2.5°	1408.6	1412.5	1416.3	1420.1	1416.3
5°	1404.8	1408.6	1412.5	1416.3	1412.5
7.5°	1397.1	1400.9	1404.8	1408.6	1404.8
10°	1385.5	1389.4	1393.2	1397.1	1393.2
12.5°	1370.1	1374.0	1377.8	1377.8	1377.8
15°	1350.9	1354.7	1358.6	1362.4	1358.6
17.5°	1331.6	1335.5	1339.3	1339.3	1339.3
20°	1308.5	1312.4	1316.2	1316.2	1316.2
22.5°	1281.6	1285.4	1289.3	1289.3	1289.3
25°	1254.7	1254.7	1258.5	1258.5	1258.5
27.5°	1223.9	1223.9	1223.9	1227.7	1227.7
30°	1193.1	1193.1	1193.1	1193.1	1196.9
32.5°	1158.4	1158.4	1154.6	1158.4	1158.4
35°	1116.1	1116.1	1116.1	1116.1	1120.0
37.5°	1081.5	1073.8	1077.6	1077.6	1077.6
40°	1035.3	1035.3	1031.4	1035.3	1035.3
42.5°	989.1	989.1	989.1	989.1	989.1
45°	942.9	939.1	939.1	942.9	939.1
47.5°	896.7	892.9	892.9	892.9	892.9
50°	850.5	842.9	842.9	842.9	842.9
52.5°	796.7	789.0	789.0	789.0	792.8
55°	742.8	735.1	735.1	735.1	738.9
57.5°	685.1	681.2	677.4	681.2	681.2
60°	627.3	623.5	623.5	623.5	623.5
62.5°	569.6	565.8	561.9	561.9	565.8
65°	508.0	504.2	504.2	504.2	504.2
67.5°	446.4	442.6	442.6	442.6	442.6
70°	384.9	381.0	381.0	384.9	381.0
72.5°	323.3	319.4	319.4	319.4	319.4
75°	261.7	261.7	257.9	257.9	257.9
77.5°	200.1	200.1	200.1	200.1	200.1
80°	146.2	142.4	142.4	142.4	142.4
82.5°	88.5	88.5	92.4	92.4	92.4
85°	46.2	50.0	50.0	53.9	53.9
87.5°	15.4	19.2	23.1	26.9	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)