

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: P412003

Luminaire Tested: **MRI-14ATR-20-L840-OPL**

Issue Date: 10/5/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P412003  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2008-915-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/5/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MRI-14ATR-20-L840-OPL  
Description: 1X4 TROFFER, 2000LM, OPAL LENS  
Light Source: (376) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1991.0 lumens  
Efficiency: N/A  
Efficacy: 70.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.38  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

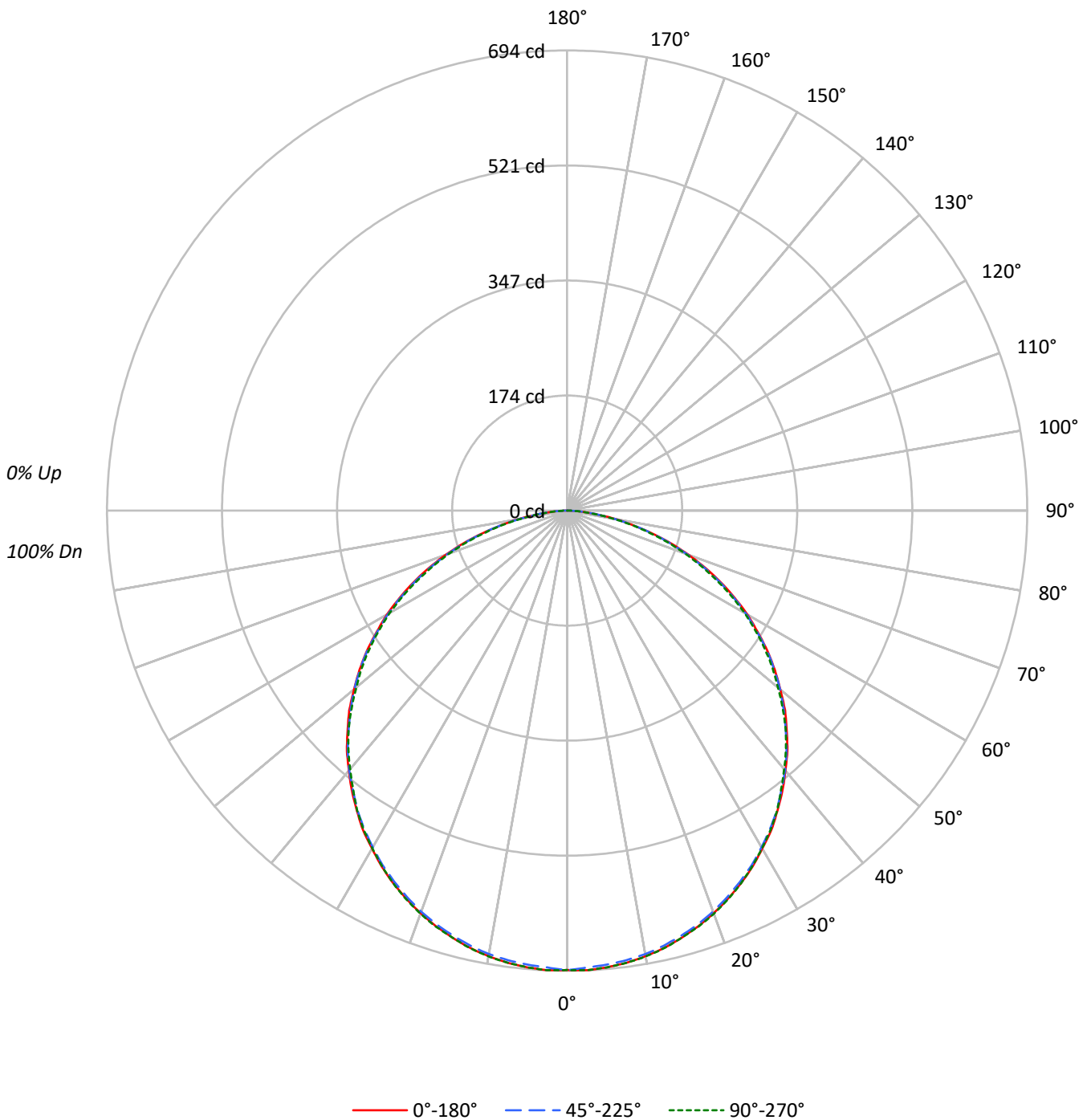
Input Watts (W): 28.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	97	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	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	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	34	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	1865	1865	1865
5°	1868	1857	1868
10°	1865	1856	1866
15°	1858	1850	1858
20°	1851	1843	1853
25°	1842	1833	1842
30°	1829	1821	1826
35°	1816	1811	1814
40°	1799	1796	1789
45°	1781	1774	1774
50°	1756	1755	1738
55°	1730	1725	1708
60°	1692	1677	1662
65°	1626	1609	1587
70°	1534	1510	1488
75°	1370	1367	1321
80°	1150	1125	1094
85°	750	763	738



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.6	3.3
10°-20°	188.1	9.4
20°-30°	285.4	14.3
30°-40°	345.2	17.3
40°-50°	359.9	18.1
50°-60°	327.5	16.5
60°-70°	249.4	12.5
70°-80°	138.2	6.9
80°-90°	31.8	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°	539.0	27.1
0°-40°	884.2	44.4
0°-60°	1571.6	78.9
0°-90°	1991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	691	691	688	691	691	66
15°	667	666	664	667	667	188
25°	620	620	617	620	620	286
35°	553	552	551	551	552	346
45°	468	468	466	466	466	361
55°	369	370	368	364	364	329
65°	255	254	253	250	249	252
75°	132	133	132	128	127	140
85°	24	25	25	24	24	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	693.0	693.0	693.0	693.0	693.0
2.5°	693.7	693.4	689.8	693.0	693.7
5°	691.4	691.0	687.5	691.0	691.4
7.5°	687.9	687.5	683.9	687.5	687.9
10°	682.4	682.0	679.2	682.0	682.8
12.5°	675.7	675.3	672.2	675.3	676.1
15°	667.1	666.3	663.9	666.7	667.1
17.5°	657.3	657.3	654.5	657.3	658.0
20°	646.3	645.9	643.5	646.3	647.1
22.5°	633.7	632.9	631.0	633.7	634.5
25°	620.4	619.6	617.2	620.0	620.4
27.5°	605.5	604.3	602.7	604.7	604.7
30°	588.6	588.2	586.2	587.8	587.8
32.5°	572.5	571.3	569.4	570.9	570.9
35°	552.9	552.5	551.3	550.9	552.1
37.5°	533.3	532.5	530.9	532.1	530.1
40°	512.1	512.1	511.3	510.5	509.3
42.5°	491.7	489.7	489.7	488.1	488.5
45°	468.1	468.1	466.2	466.2	466.2
47.5°	445.8	444.2	442.6	441.8	440.7
50°	419.5	420.3	419.1	416.3	415.2
52.5°	394.7	394.7	393.6	392.8	390.4
55°	368.8	369.6	367.7	364.1	364.1
57.5°	340.6	341.8	339.4	336.7	336.7
60°	314.3	313.5	311.6	309.2	308.8
62.5°	284.5	284.1	282.5	279.4	279.4
65°	255.4	254.3	252.7	250.0	249.2
67.5°	225.2	224.1	222.5	220.5	218.2
70°	195.0	193.8	191.9	189.1	189.1
72.5°	164.4	163.2	161.3	158.5	158.5
75°	131.8	132.6	131.5	127.5	127.1
77.5°	102.0	102.4	101.2	99.3	98.5
80°	74.2	73.0	72.6	71.0	70.6
82.5°	46.7	47.5	47.1	45.9	45.1
85°	24.3	24.7	24.7	24.3	23.9
87.5°	9.0	9.8	9.8	9.8	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)