

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: P412021

Luminaire Tested: **MRI-22ATR-20-L840-OPL**

Issue Date: 10/5/2020

Test Information

Test Method: LM-79-08
Report Number: P412021
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2008-915-2)
Test Lab: INNOVATION CENTER
Issue Date: 10/5/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MRI-22ATR-20-L840-OPL
Description: 2X2 TROFFER, 2000LM, OPAL LENS
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2016.0 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

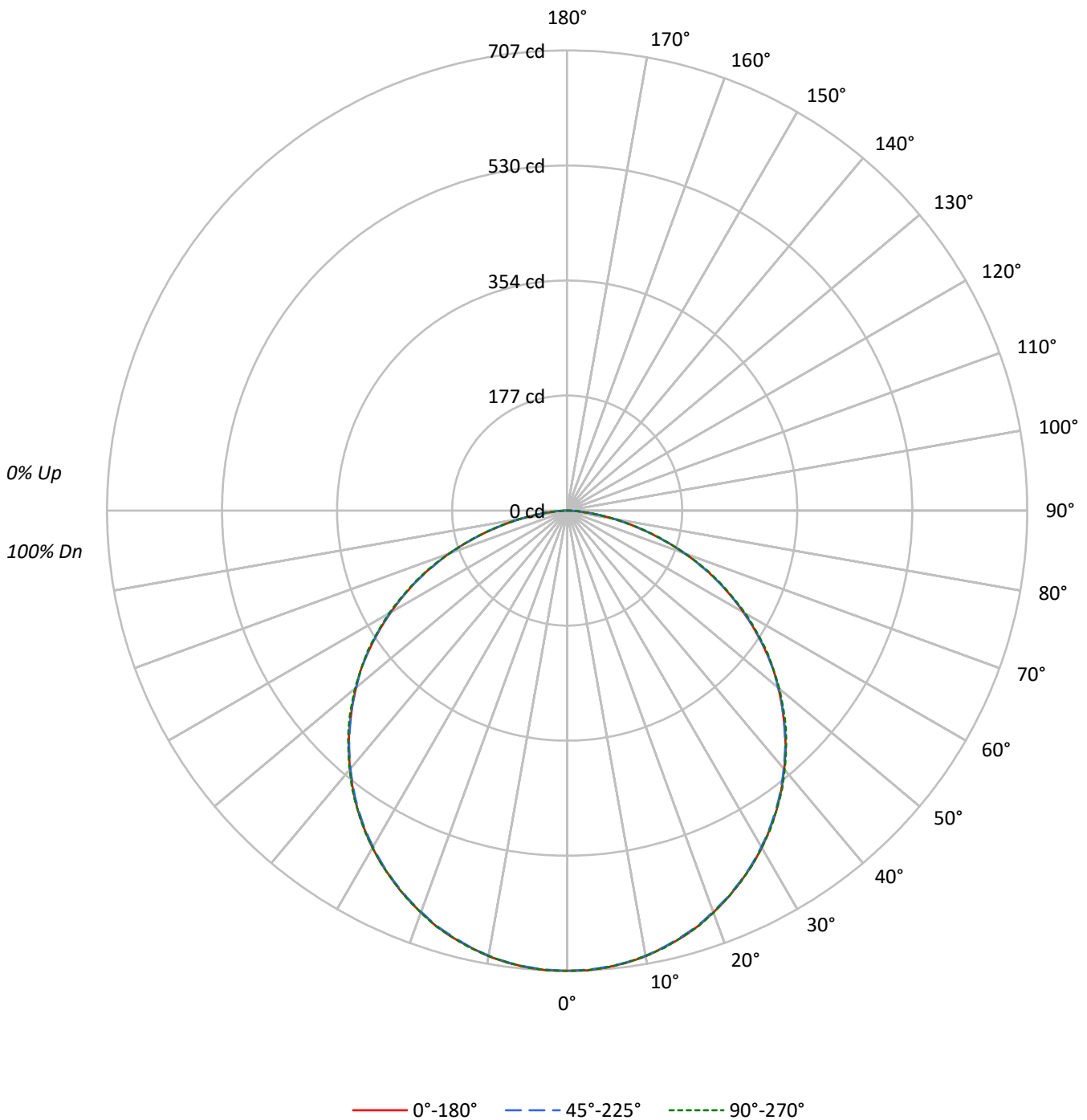
Input Watts (W): 28.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		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	52	39	31	26	38	31	26		37	31	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1903	1903	1903
5°	1903	1901	1904
10°	1899	1897	1899
15°	1893	1889	1892
20°	1881	1879	1882
25°	1870	1867	1870
30°	1859	1853	1859
35°	1845	1839	1843
40°	1822	1819	1827
45°	1800	1796	1809
50°	1773	1773	1781
55°	1738	1741	1750
60°	1685	1690	1701
65°	1622	1616	1631
70°	1514	1516	1516
75°	1340	1344	1361
80°	1102	1102	1124
85°	722	763	710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.9	3.3
10°-20°	191.5	9.5
20°-30°	290.1	14.4
30°-40°	350.5	17.4
40°-50°	365.1	18.1
50°-60°	331.4	16.4
60°-70°	251.3	12.5
70°-80°	137.8	6.8
80°-90°	31.3	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°	548.6	27.2
0°-40°	899.1	44.6
0°-60°	1595.6	79.1
0°-90°	2016.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2016.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	707	707	707	707	707	
5°	704	704	704	704	705	67
15°	679	679	678	678	679	192
25°	630	629	629	630	630	290
35°	562	560	560	560	561	351
45°	473	473	472	474	475	365
55°	370	370	371	373	373	331
65°	255	253	254	254	256	251
75°	129	130	129	131	131	137
85°	23	24	25	24	23	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	707.1	707.1	707.1	707.1	707.1
2.5°	707.1	706.4	706.1	706.4	706.8
5°	704.4	704.1	703.7	704.1	704.7
7.5°	700.7	700.4	700.1	700.1	700.4
10°	695.1	694.7	694.4	694.7	695.1
12.5°	687.4	687.4	687.0	687.0	688.0
15°	679.4	678.7	678.0	678.4	679.0
17.5°	669.3	668.3	668.3	668.7	669.7
20°	657.0	657.0	656.0	656.7	657.3
22.5°	644.3	643.6	643.3	644.0	644.3
25°	629.9	628.9	628.9	630.3	629.9
27.5°	614.6	613.6	613.6	613.9	614.9
30°	598.2	597.5	596.5	597.5	598.2
32.5°	579.8	578.8	578.8	579.8	580.8
35°	561.5	560.1	559.8	560.5	561.1
37.5°	540.4	539.4	539.4	541.1	541.8
40°	518.7	518.7	517.7	519.4	520.0
42.5°	497.0	496.3	495.7	497.7	497.7
45°	472.9	472.6	471.9	474.3	475.3
47.5°	448.2	449.2	448.6	450.2	450.6
50°	423.5	423.2	423.5	424.5	425.5
52.5°	398.8	397.1	397.8	398.1	398.8
55°	370.4	370.1	371.1	372.7	373.1
57.5°	342.0	342.0	342.7	344.7	344.4
60°	313.0	313.3	314.0	315.3	316.0
62.5°	283.6	283.9	284.2	286.2	285.6
65°	254.8	253.2	253.8	254.5	256.2
67.5°	223.4	222.4	222.4	224.1	225.5
70°	192.4	191.7	192.7	193.1	192.7
72.5°	160.0	160.7	161.0	161.7	161.3
75°	128.9	129.6	129.3	130.6	130.9
77.5°	99.2	99.9	100.5	100.5	99.9
80°	71.1	71.1	71.1	71.5	72.5
82.5°	44.4	45.4	46.8	45.1	45.8
85°	23.4	24.0	24.7	24.0	23.0
87.5°	9.7	10.0	9.7	10.0	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)