

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: P412042

Luminaire Tested: **MRI-24ATR-20-L940-OPL**

Issue Date: 10/5/2020

Test Information

Test Method: LM-79-08
Report Number: P412042
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-20-L940-OPL
Description: 2X4 TROFFER, 2000LM, OPAL LENS
Light Source: (1008) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1782.0 lumens
Efficiency: N/A
Efficacy: 69.1 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

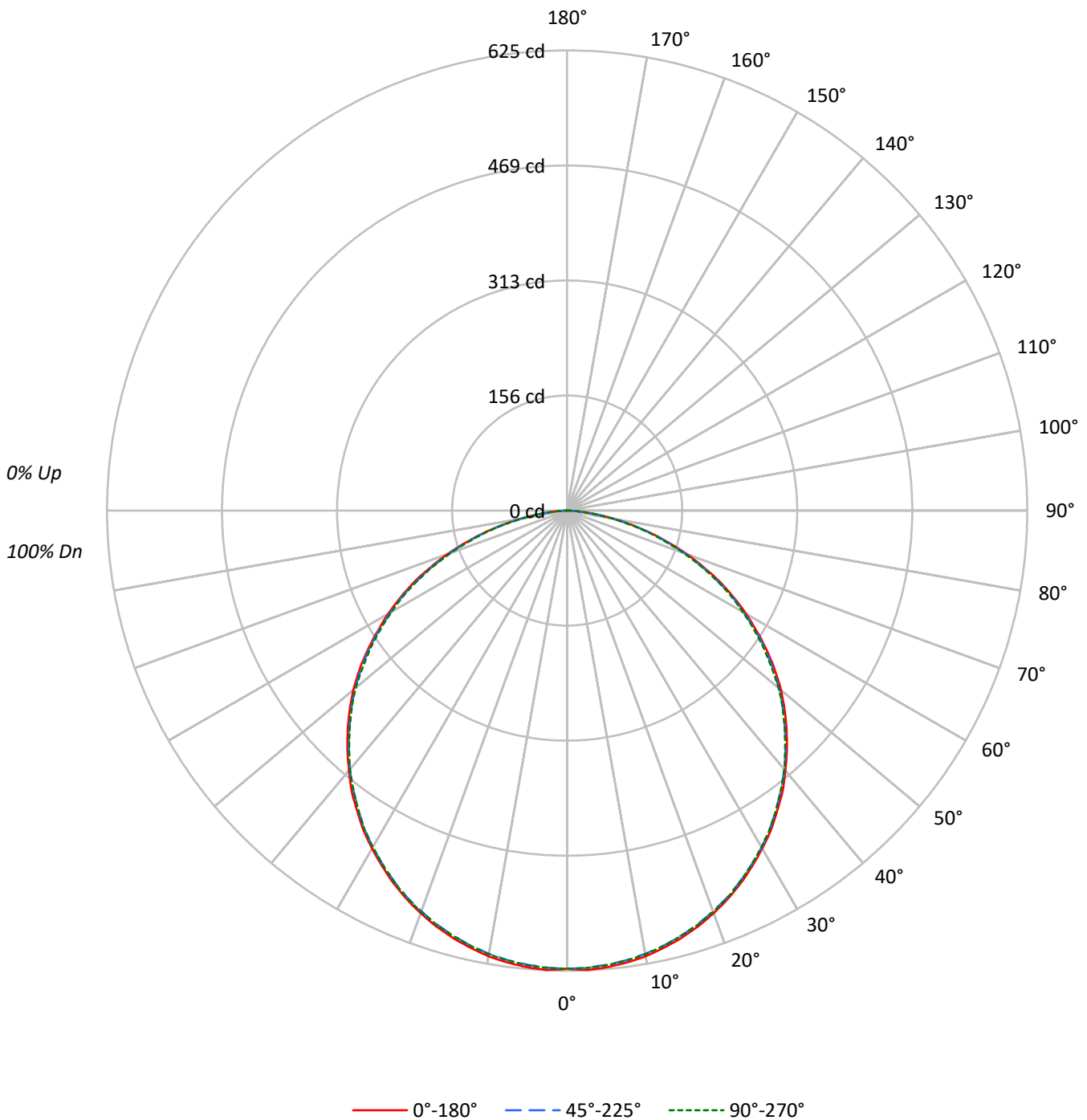
Input Watts (W): 25.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	837	837	837
5°	841	836	837
10°	840	835	836
15°	837	832	833
20°	833	829	831
25°	829	825	826
30°	823	821	820
35°	817	813	813
40°	810	806	806
45°	802	796	795
50°	794	786	785
55°	777	771	765
60°	756	746	741
65°	729	716	712
70°	682	668	660
75°	609	601	591
80°	490	489	487
85°	323	323	306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.9	3.3
10°-20°	168.9	9.5
20°-30°	256.4	14.4
30°-40°	310.1	17.4
40°-50°	323.2	18.1
50°-60°	293.3	16.5
60°-70°	222.5	12.5
70°-80°	121.8	6.8
80°-90°	27.0	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°	484.2	27.2
0°-40°	794.2	44.6
0°-60°	1410.7	79.2
0°-90°	1782.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1782.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	622	622	622	622	622	
5°	623	620	619	618	620	59
15°	601	599	598	597	598	170
25°	558	557	556	555	556	257
35°	497	496	495	494	495	312
45°	422	420	418	418	418	325
55°	331	330	329	327	326	296
65°	229	227	225	224	224	226
75°	117	116	116	113	114	124
85°	21	20	21	21	20	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	622.3	622.3	622.3	622.3	622.3
2.5°	624.6	622.3	621.3	620.5	621.8
5°	622.6	620.3	619.2	618.5	619.8
7.5°	619.2	617.2	615.9	615.2	616.4
10°	614.7	612.4	611.1	610.6	611.9
12.5°	608.1	606.3	605.3	604.8	605.5
15°	600.9	599.2	597.6	596.9	598.1
17.5°	592.0	590.3	589.2	588.5	589.7
20°	581.9	580.3	579.1	578.6	580.1
22.5°	570.7	569.4	568.4	567.6	569.1
25°	558.2	556.7	555.7	554.9	556.2
27.5°	544.5	543.2	542.2	541.4	542.4
30°	530.0	529.0	528.2	526.9	527.7
32.5°	515.0	512.9	512.2	511.9	512.7
35°	497.4	496.2	495.1	494.1	495.1
37.5°	480.9	478.4	477.3	476.8	477.1
40°	461.1	459.8	459.0	457.3	458.8
42.5°	441.7	440.7	438.9	438.2	438.2
45°	421.6	419.9	418.1	418.1	417.6
47.5°	400.8	399.5	397.5	396.7	397.0
50°	379.2	376.9	375.4	373.6	375.1
52.5°	355.8	354.0	352.5	350.9	349.9
55°	331.4	329.6	328.6	327.0	326.0
57.5°	305.7	305.4	303.6	301.9	301.1
60°	281.0	279.2	277.2	277.2	275.2
62.5°	255.1	253.5	252.5	250.2	250.8
65°	228.9	227.1	224.8	224.0	223.5
67.5°	200.4	199.4	197.3	195.6	195.8
70°	173.4	171.4	169.9	168.4	167.8
72.5°	144.7	143.4	142.4	140.9	139.6
75°	117.2	115.7	115.7	113.4	113.7
77.5°	90.3	89.5	88.2	87.5	86.7
80°	63.3	63.6	63.1	61.5	62.8
82.5°	40.9	40.2	39.7	39.7	39.4
85°	20.9	20.3	20.9	20.9	19.8
87.5°	6.4	7.1	7.4	7.4	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)