

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: P547188

Luminaire Tested: **FMR-24-4-LD4-3STD-35-UNV-93-94-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P547188
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-3STD-35-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

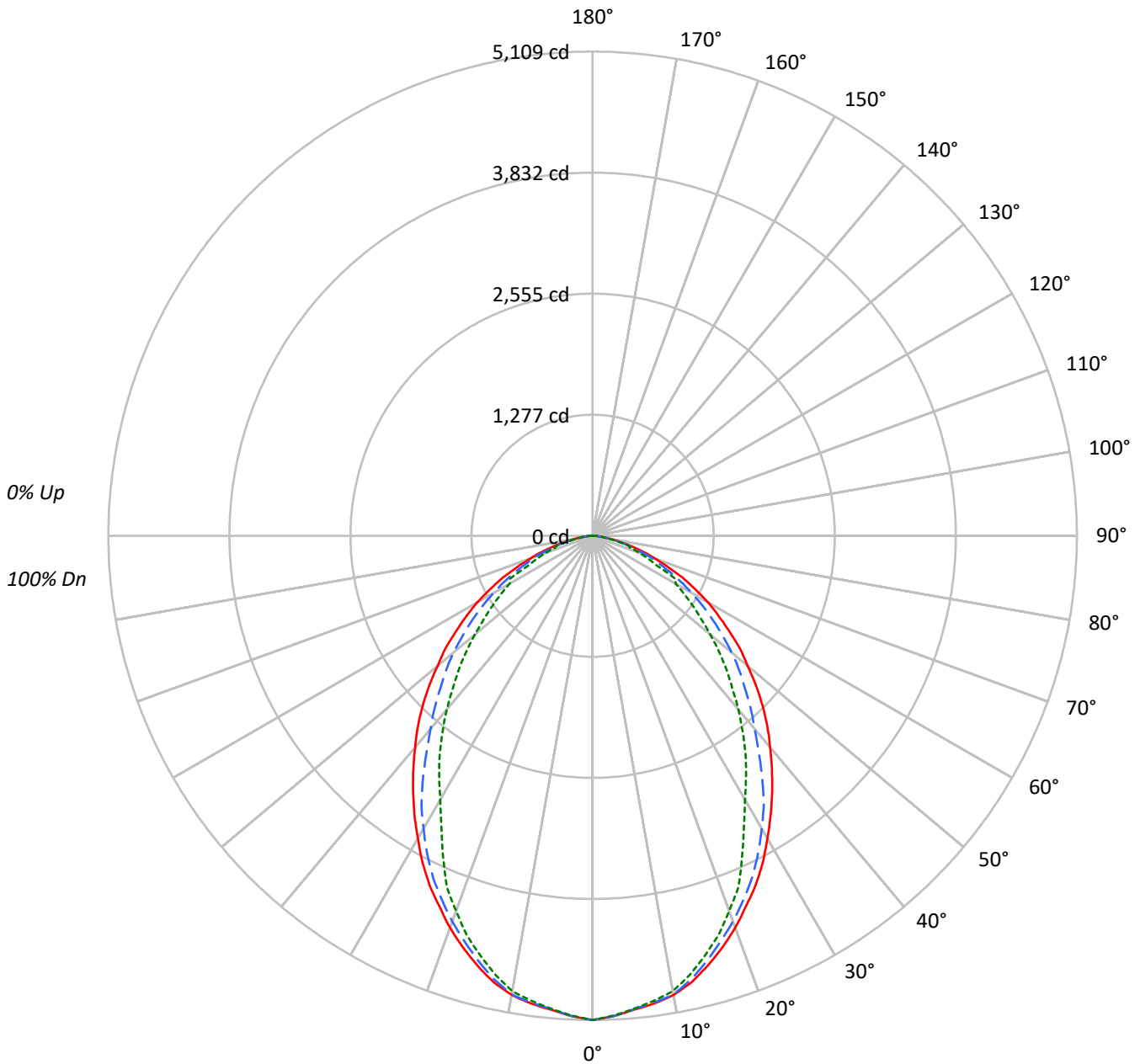
Lumens per Lamp: N/A
Luminaire Lumens: 10030.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (A_{in}): 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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6874	6874	6874
5°	6781	6773	6765
10°	6722	6714	6666
15°	6541	6475	6385
20°	6301	6199	6030
25°	6042	5910	5542
30°	5726	5543	4992
35°	5423	5122	4618
40°	5114	4668	4202
45°	4822	4316	3799
50°	4463	4006	3388
55°	4129	3630	3034
60°	3783	3242	2718
65°	3329	2840	2407
70°	2742	2486	2045
75°	2180	1904	1996
80°	1464	1373	1282
85°	912	1095	1277



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	475.6	4.7
10°-20°	1305.2	13.0
20°-30°	1807.0	18.0
30°-40°	1926.8	19.2
40°-50°	1757.8	17.5
50°-60°	1377.1	13.7
60°-70°	897.5	8.9
70°-80°	397.6	4.0
80°-90°	85.4	0.9
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°	3587.8	35.8
0°-40°	5514.6	55.0
0°-60°	8649.5	86.2
0°-90°	10030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10030.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5109	5109	5109	5109	5109	
5°	5021	5015	5015	5009	5009	477
15°	4696	4696	4648	4601	4584	1320
25°	4070	4046	3981	3839	3733	1868
35°	3302	3278	3119	2882	2812	2064
45°	2534	2481	2268	2079	1996	1952
55°	1760	1707	1548	1364	1294	1579
65°	1046	986	892	910	756	1030
75°	419	390	366	348	384	449
85°	59	65	71	77	83	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5109.1	5109.1	5109.1	5109.1	5109.1
2.5°	5073.7	5073.7	5073.7	5067.8	5067.8
5°	5020.6	5014.6	5014.6	5008.7	5008.7
7.5°	4979.2	4973.3	4967.4	4961.5	4949.7
10°	4920.1	4920.1	4914.2	4884.7	4878.8
12.5°	4825.6	4819.7	4796.1	4754.8	4742.9
15°	4695.7	4695.7	4648.4	4601.2	4583.5
17.5°	4553.9	4548.0	4489.0	4441.7	4418.1
20°	4400.4	4388.6	4329.5	4252.7	4211.4
22.5°	4229.1	4229.1	4158.2	4057.8	4016.4
25°	4069.6	4046.0	3981.0	3839.2	3732.9
27.5°	3886.5	3851.1	3780.2	3579.4	3455.3
30°	3685.7	3668.0	3567.5	3307.7	3213.2
32.5°	3496.7	3467.1	3360.8	3089.1	3012.3
35°	3301.7	3278.1	3118.6	2882.4	2811.5
37.5°	3106.8	3077.3	2876.5	2687.5	2598.9
40°	2911.9	2876.5	2657.9	2486.6	2392.1
42.5°	2728.8	2681.6	2468.9	2285.8	2179.5
45°	2533.9	2480.7	2268.1	2079.1	1996.4
47.5°	2339.0	2291.7	2096.8	1901.9	1807.4
50°	2132.3	2090.9	1913.7	1718.8	1618.4
52.5°	1961.0	1896.0	1724.7	1529.8	1447.1
55°	1760.1	1707.0	1547.5	1364.4	1293.5
57.5°	1577.0	1523.9	1376.2	1204.9	1145.9
60°	1405.8	1329.0	1204.9	1057.3	1010.0
62.5°	1216.7	1157.7	1051.4	927.3	986.4
65°	1045.5	986.4	891.9	909.6	756.0
67.5°	856.4	826.9	744.2	661.5	637.9
70°	697.0	661.5	632.0	543.4	519.8
72.5°	555.2	519.8	478.4	431.2	413.5
75°	419.4	389.8	366.2	348.5	383.9
77.5°	289.4	277.6	259.9	242.2	236.3
80°	189.0	183.1	177.2	171.3	165.4
82.5°	112.2	112.2	112.2	112.2	112.2
85°	59.1	65.0	70.9	76.8	82.7
87.5°	35.4	35.4	41.3	47.3	53.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)