

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: P547053

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-82-96-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: P547053
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-LD4-3HI-50-UNV-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

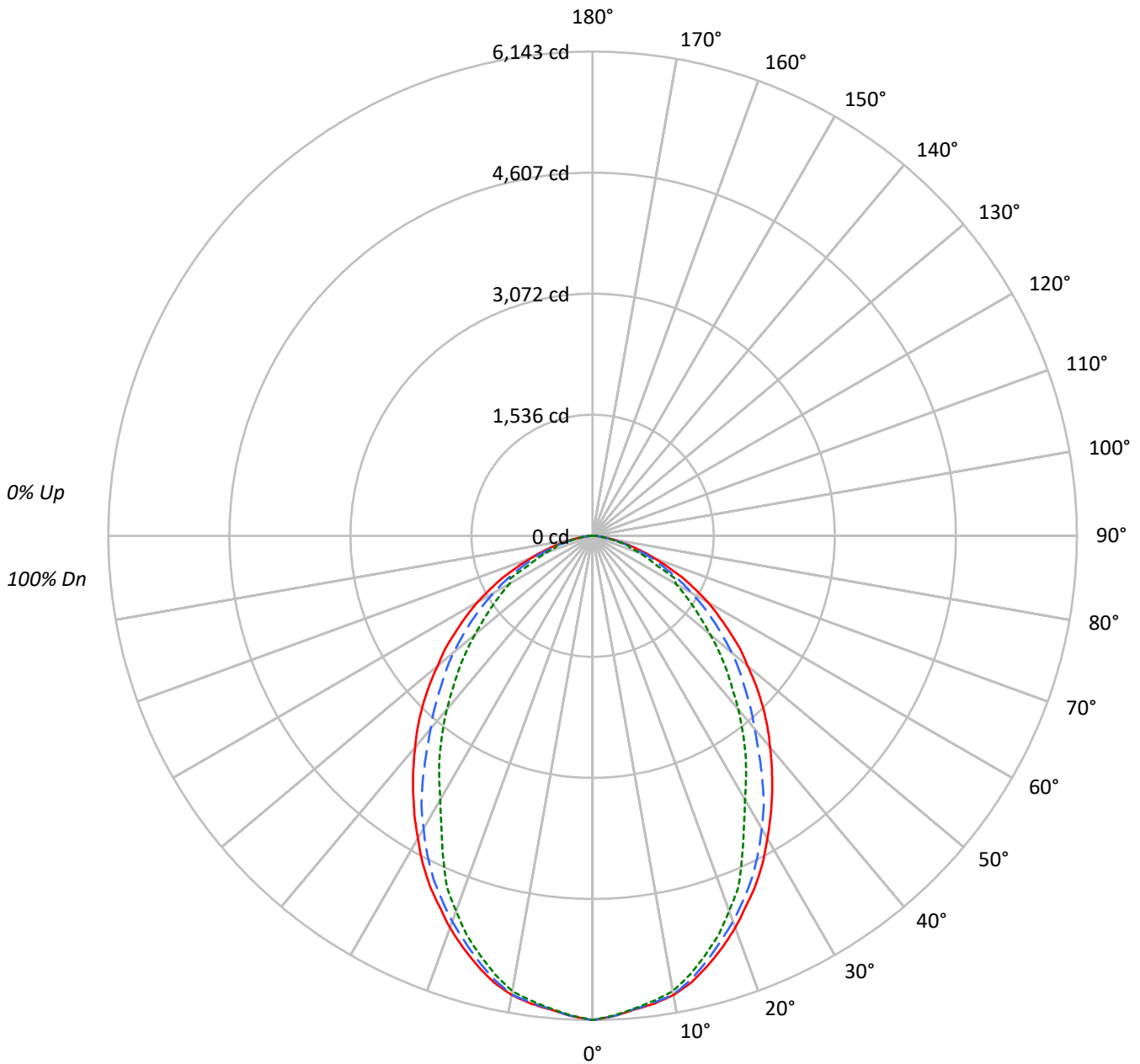
Lumens per Lamp: N/A
Luminaire Lumens: 12060.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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									
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°	8266	8266	8266
5°	8153	8144	8134
10°	8083	8073	8015
15°	7865	7785	7677
20°	7576	7454	7250
25°	7265	7106	6663
30°	6885	6664	6002
35°	6521	6159	5553
40°	6150	5613	5052
45°	5797	5189	4568
50°	5367	4816	4073
55°	4965	4365	3648
60°	4549	3899	3268
65°	4002	3414	2894
70°	3297	2989	2459
75°	2621	2289	2400
80°	1761	1651	1541
85°	1096	1315	1535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	571.9	4.7
10°-20°	1569.4	13.0
20°-30°	2172.7	18.0
30°-40°	2316.8	19.2
40°-50°	2113.6	17.5
50°-60°	1655.8	13.7
60°-70°	1079.2	8.9
70°-80°	478.1	4.0
80°-90°	102.6	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°	4314.0	35.8
0°-40°	6630.7	55.0
0°-60°	10400.1	86.2
0°-90°	12060.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12060.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6143	6143	6143	6143	6143	
5°	6037	6030	6030	6022	6022	573
15°	5646	5646	5589	5532	5511	1587
25°	4893	4865	4787	4616	4488	2246
35°	3970	3942	3750	3466	3380	2482
45°	3047	2983	2727	2500	2400	2347
55°	2116	2052	1861	1641	1555	1898
65°	1257	1186	1072	1094	909	1239
75°	504	469	440	419	462	540
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6143.2	6143.2	6143.2	6143.2	6143.2
2.5°	6100.6	6100.6	6100.6	6093.5	6093.5
5°	6036.7	6029.6	6029.6	6022.5	6022.5
7.5°	5987.0	5979.9	5972.8	5965.7	5951.4
10°	5915.9	5915.9	5908.8	5873.3	5866.2
12.5°	5802.3	5795.2	5766.8	5717.1	5702.9
15°	5646.1	5646.1	5589.2	5532.4	5511.1
17.5°	5475.6	5468.5	5397.5	5340.7	5312.3
20°	5291.0	5276.8	5205.7	5113.4	5063.7
22.5°	5085.0	5085.0	4999.8	4879.1	4829.3
25°	4893.3	4864.8	4786.7	4616.3	4488.4
27.5°	4673.1	4630.5	4545.3	4303.8	4154.7
30°	4431.6	4410.3	4289.6	3977.1	3863.5
32.5°	4204.4	4168.9	4041.0	3714.3	3622.0
35°	3970.0	3941.6	3749.8	3465.8	3380.5
37.5°	3735.6	3700.1	3458.7	3231.4	3124.9
40°	3501.3	3458.7	3195.9	2989.9	2876.3
42.5°	3281.1	3224.3	2968.6	2748.5	2620.6
45°	3046.7	2982.8	2727.2	2499.9	2400.5
47.5°	2812.4	2755.6	2521.2	2286.8	2173.2
50°	2563.8	2514.1	2301.0	2066.7	1945.9
52.5°	2357.9	2279.7	2073.8	1839.4	1740.0
55°	2116.4	2052.5	1860.7	1640.6	1555.3
57.5°	1896.2	1832.3	1654.8	1448.8	1377.8
60°	1690.3	1597.9	1448.8	1271.3	1214.4
62.5°	1463.0	1392.0	1264.2	1115.0	1186.0
65°	1257.0	1186.0	1072.4	1093.7	909.1
67.5°	1029.8	994.3	894.8	795.4	767.0
70°	838.0	795.4	759.9	653.4	625.0
72.5°	667.6	625.0	575.3	518.4	497.1
75°	504.2	468.7	440.3	419.0	461.6
77.5°	348.0	333.8	312.5	291.2	284.1
80°	227.3	220.2	213.1	206.0	198.9
82.5°	134.9	134.9	134.9	134.9	134.9
85°	71.0	78.1	85.2	92.3	99.4
87.5°	42.6	42.6	49.7	56.8	63.9
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)