

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: P547060

Luminaire Tested: **FMR-24-4-LD4-3HI-50-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: P547060
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-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

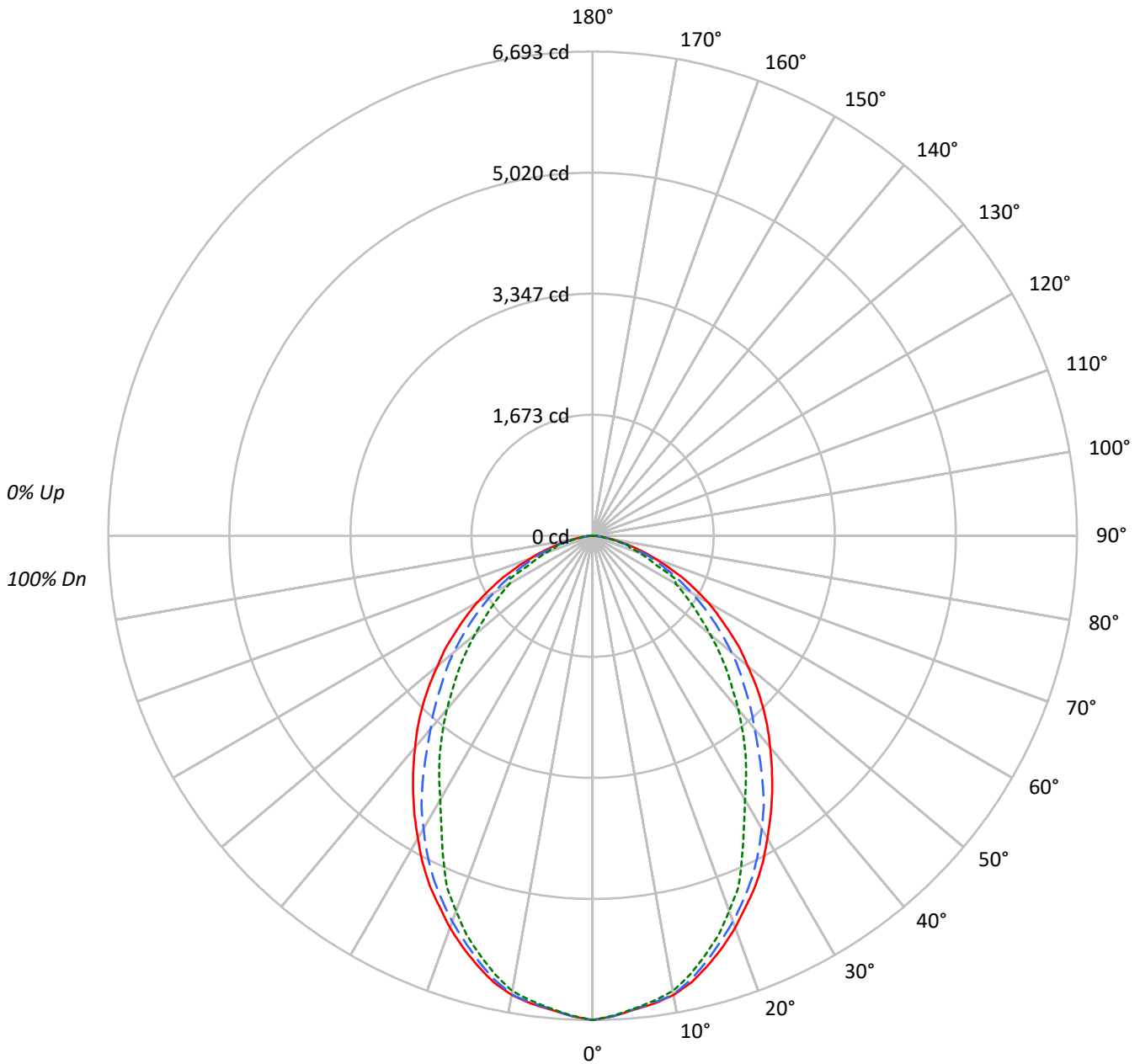
Lumens per Lamp: N/A
Luminaire Lumens: 13139.0 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	9005	9005	9005
5°	8883	8872	8862
10°	8806	8795	8732
15°	8568	8482	8364
20°	8254	8121	7899
25°	7914	7742	7260
30°	7501	7261	6539
35°	7104	6710	6049
40°	6700	6115	5504
45°	6316	5654	4976
50°	5847	5247	4438
55°	5409	4755	3975
60°	4955	4247	3560
65°	4360	3720	3153
70°	3592	3257	2679
75°	2856	2494	2614
80°	1918	1798	1678
85°	1195	1433	1672



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	623.0	4.7
10°-20°	1709.8	13.0
20°-30°	2367.1	18.0
30°-40°	2524.0	19.2
40°-50°	2302.7	17.5
50°-60°	1803.9	13.7
60°-70°	1175.7	8.9
70°-80°	520.9	4.0
80°-90°	111.8	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°	4699.9	35.8
0°-40°	7224.0	55.0
0°-60°	11330.5	86.2
0°-90°	13139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13139.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6693	6693	6693	6693	6693	
5°	6577	6569	6569	6561	6561	624
15°	6151	6151	6089	6027	6004	1729
25°	5331	5300	5215	5029	4890	2447
35°	4325	4294	4085	3776	3683	2704
45°	3319	3250	2971	2724	2615	2557
55°	2306	2236	2027	1787	1694	2068
65°	1370	1292	1168	1192	990	1350
75°	549	511	480	456	503	589
85°	77	85	93	101	108	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6692.8	6692.8	6692.8	6692.8	6692.8
2.5°	6646.4	6646.4	6646.4	6638.7	6638.7
5°	6576.8	6569.0	6569.0	6561.3	6561.3
7.5°	6522.6	6514.9	6507.1	6499.4	6483.9
10°	6445.2	6445.2	6437.5	6398.8	6391.1
12.5°	6321.4	6313.7	6282.8	6228.6	6213.1
15°	6151.2	6151.2	6089.3	6027.4	6004.2
17.5°	5965.5	5957.8	5880.4	5818.5	5787.6
20°	5764.3	5748.9	5671.5	5570.9	5516.7
22.5°	5540.0	5540.0	5447.1	5315.6	5261.4
25°	5331.1	5300.1	5215.0	5029.3	4890.0
27.5°	5091.2	5044.8	4951.9	4688.9	4526.4
30°	4828.1	4804.9	4673.4	4332.9	4209.1
32.5°	4580.5	4541.8	4402.6	4046.6	3946.1
35°	4325.2	4294.2	4085.3	3775.8	3683.0
37.5°	4069.9	4031.2	3768.1	3520.5	3404.4
40°	3814.5	3768.1	3481.8	3257.4	3133.6
42.5°	3574.7	3512.8	3234.2	2994.4	2855.1
45°	3319.3	3249.7	2971.2	2723.6	2615.2
47.5°	3064.0	3002.1	2746.8	2491.4	2367.6
50°	2793.2	2739.0	2506.9	2251.6	2120.0
52.5°	2568.8	2483.7	2259.3	2004.0	1895.7
55°	2305.7	2236.1	2027.2	1787.3	1694.5
57.5°	2065.9	1996.2	1802.8	1578.4	1501.1
60°	1841.5	1740.9	1578.4	1385.0	1323.1
62.5°	1593.9	1516.5	1377.3	1214.8	1292.1
65°	1369.5	1292.1	1168.3	1191.6	990.4
67.5°	1121.9	1083.2	974.9	866.6	835.6
70°	913.0	866.6	827.9	711.8	680.9
72.5°	727.3	680.9	626.7	564.8	541.6
75°	549.4	510.7	479.7	456.5	502.9
77.5°	379.1	363.7	340.4	317.2	309.5
80°	247.6	239.9	232.1	224.4	216.6
82.5°	147.0	147.0	147.0	147.0	147.0
85°	77.4	85.1	92.8	100.6	108.3
87.5°	46.4	46.4	54.2	61.9	69.6
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)