

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: P546977

Luminaire Tested: **FMR-24-4-LD4-3HI-35-UNV-81-86-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: P546977
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-35-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

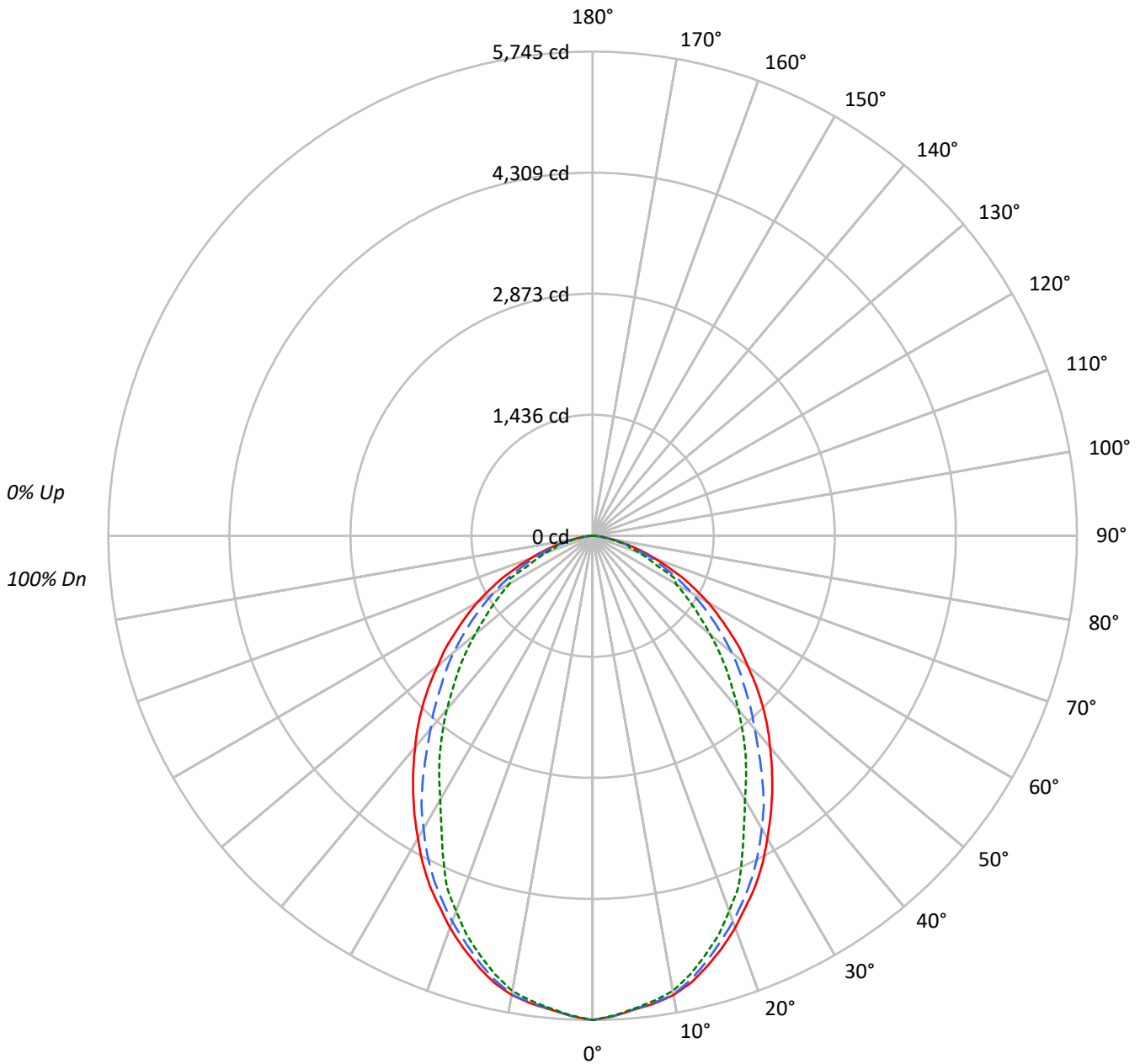
Lumens per Lamp: N/A
Luminaire Lumens: 11278.0 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	7730	7730	7730
5°	7625	7616	7607
10°	7558	7549	7495
15°	7355	7281	7179
20°	7085	6970	6780
25°	6793	6645	6231
30°	6439	6232	5613
35°	6098	5760	5193
40°	5751	5249	4724
45°	5421	4853	4271
50°	5019	4504	3809
55°	4643	4082	3412
60°	4254	3646	3056
65°	3742	3193	2706
70°	3083	2795	2299
75°	2451	2141	2244
80°	1647	1543	1441
85°	1025	1230	1436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	534.8	4.7
10°-20°	1467.6	13.0
20°-30°	2031.8	18.0
30°-40°	2166.5	19.2
40°-50°	1976.5	17.5
50°-60°	1548.4	13.7
60°-70°	1009.2	8.9
70°-80°	447.1	4.0
80°-90°	96.0	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°	4034.2	35.8
0°-40°	6200.8	55.0
0°-60°	9725.7	86.2
0°-90°	11278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11278.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5745	5745	5745	5745	5745	
5°	5645	5639	5639	5632	5632	536
15°	5280	5280	5227	5174	5154	1484
25°	4576	4549	4476	4317	4197	2101
35°	3713	3686	3507	3241	3161	2321
45°	2849	2789	2550	2338	2245	2195
55°	1979	1919	1740	1534	1454	1775
65°	1176	1109	1003	1023	850	1158
75°	472	438	412	392	432	505
85°	66	73	80	86	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5744.9	5744.9	5744.9	5744.9	5744.9
2.5°	5705.0	5705.0	5705.0	5698.4	5698.4
5°	5645.2	5638.6	5638.6	5632.0	5632.0
7.5°	5598.8	5592.1	5585.5	5578.8	5565.5
10°	5532.3	5532.3	5525.7	5492.5	5485.8
12.5°	5426.1	5419.4	5392.9	5346.4	5333.1
15°	5280.0	5280.0	5226.8	5173.7	5153.8
17.5°	5120.6	5113.9	5047.5	4994.4	4967.8
20°	4947.9	4934.6	4868.2	4781.9	4735.4
22.5°	4755.3	4755.3	4675.6	4562.7	4516.2
25°	4576.0	4549.4	4476.3	4316.9	4197.4
27.5°	4370.1	4330.2	4250.5	4024.7	3885.3
30°	4144.3	4124.3	4011.4	3719.2	3613.0
32.5°	3931.7	3898.5	3779.0	3473.5	3387.1
35°	3712.6	3686.0	3506.7	3241.0	3161.3
37.5°	3493.4	3460.2	3234.4	3021.9	2922.2
40°	3274.2	3234.4	2988.7	2796.1	2689.8
42.5°	3068.4	3015.2	2776.1	2570.2	2450.7
45°	2849.2	2789.4	2550.3	2337.8	2244.8
47.5°	2630.0	2576.9	2357.7	2138.5	2032.3
50°	2397.6	2351.1	2151.8	1932.7	1819.8
52.5°	2205.0	2131.9	1939.3	1720.1	1627.2
55°	1979.2	1919.4	1740.1	1534.2	1454.5
57.5°	1773.3	1713.5	1547.5	1354.9	1288.4
60°	1580.7	1494.3	1354.9	1188.8	1135.7
62.5°	1368.1	1301.7	1182.2	1042.7	1109.1
65°	1175.5	1109.1	1002.9	1022.8	850.1
67.5°	963.0	929.8	836.8	743.8	717.3
70°	783.7	743.8	710.6	611.0	584.4
72.5°	624.3	584.4	538.0	484.8	464.9
75°	471.5	438.3	411.8	391.8	431.7
77.5°	325.4	312.1	292.2	272.3	265.7
80°	212.5	205.9	199.2	192.6	186.0
82.5°	126.2	126.2	126.2	126.2	126.2
85°	66.4	73.1	79.7	86.3	93.0
87.5°	39.8	39.8	46.5	53.1	59.8
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)