

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: P547289

Luminaire Tested: **FMR-24-4-LD4-4HI-40-UNV-80-86-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: P547289
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-LD4-4HI-40-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

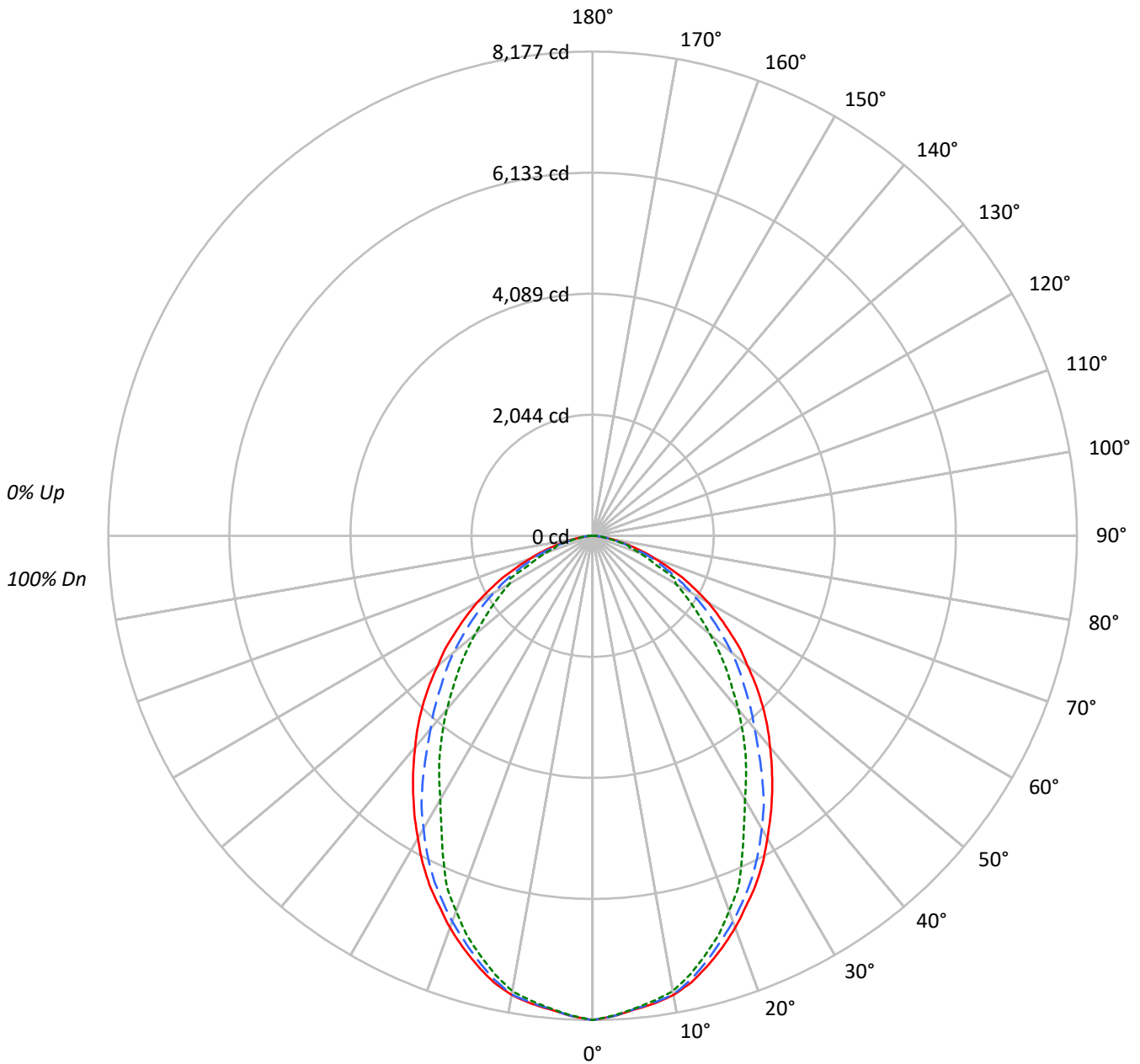
Lumens per Lamp: N/A
Luminaire Lumens: 16053.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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									
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°	11002	11002	11002
5°	10853	10840	10827
10°	10759	10746	10668
15°	10469	10363	10218
20°	10084	9922	9651
25°	9670	9459	8870
30°	9165	8871	7990
35°	8680	8199	7391
40°	8186	7472	6725
45°	7717	6907	6080
50°	7143	6411	5422
55°	6608	5810	4856
60°	6054	5190	4350
65°	5327	4545	3852
70°	4388	3979	3273
75°	3489	3047	3195
80°	2344	2197	2051
85°	1459	1751	2042



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	761.2	4.7
10°-20°	2089.0	13.0
20°-30°	2892.1	18.0
30°-40°	3083.8	19.2
40°-50°	2813.3	17.5
50°-60°	2204.0	13.7
60°-70°	1436.5	8.9
70°-80°	636.4	4.0
80°-90°	136.6	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°	5742.3	35.8
0°-40°	8826.1	55.0
0°-60°	13843.5	86.2
0°-90°	16053.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16053.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8177	8177	8177	8177	8177	
5°	8035	8026	8026	8016	8016	763
15°	7515	7515	7440	7364	7336	2113
25°	6513	6476	6372	6145	5974	2990
35°	5284	5247	4991	4613	4500	3304
45°	4056	3970	3630	3328	3195	3124
55°	2817	2732	2477	2184	2070	2527
65°	1673	1579	1428	1456	1210	1649
75°	671	624	586	558	614	719
85°	94	104	113	123	132	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8177.2	8177.2	8177.2	8177.2	8177.2
2.5°	8120.5	8120.5	8120.5	8111.0	8111.0
5°	8035.4	8025.9	8025.9	8016.5	8016.5
7.5°	7969.2	7959.8	7950.3	7940.8	7921.9
10°	7874.7	7874.7	7865.2	7818.0	7808.5
12.5°	7723.4	7714.0	7676.2	7610.0	7591.1
15°	7515.4	7515.4	7439.8	7364.2	7335.8
17.5°	7288.6	7279.1	7184.6	7109.0	7071.1
20°	7042.8	7023.9	6929.3	6806.4	6740.3
22.5°	6768.6	6768.6	6655.2	6494.5	6428.3
25°	6513.4	6475.6	6371.6	6144.7	5974.5
27.5°	6220.3	6163.6	6050.2	5728.8	5530.2
30°	5898.9	5870.6	5709.8	5293.9	5142.6
32.5°	5596.4	5549.1	5379.0	4944.1	4821.2
35°	5284.4	5246.6	4991.4	4613.3	4499.8
37.5°	4972.5	4925.2	4603.8	4301.3	4159.5
40°	4660.5	4603.8	4254.0	3979.9	3828.6
42.5°	4367.5	4291.8	3951.5	3658.5	3488.3
45°	4055.5	3970.4	3630.1	3327.6	3195.2
47.5°	3743.5	3667.9	3356.0	3044.0	2892.7
50°	3412.7	3346.5	3062.9	2750.9	2590.2
52.5°	3138.5	3034.5	2760.4	2448.4	2316.1
55°	2817.1	2732.0	2476.8	2183.7	2070.3
57.5°	2524.1	2439.0	2202.6	1928.5	1834.0
60°	2249.9	2127.0	1928.5	1692.2	1616.5
62.5°	1947.4	1852.9	1682.7	1484.2	1578.7
65°	1673.3	1578.7	1427.5	1455.8	1210.0
67.5°	1370.7	1323.5	1191.1	1058.8	1021.0
70°	1115.5	1058.8	1011.5	869.7	831.9
72.5°	888.6	831.9	765.7	690.1	661.7
75°	671.2	623.9	586.1	557.8	614.5
77.5°	463.2	444.3	415.9	387.6	378.1
80°	302.5	293.1	283.6	274.1	264.7
82.5°	179.6	179.6	179.6	179.6	179.6
85°	94.5	104.0	113.4	122.9	132.3
87.5°	56.7	56.7	66.2	75.6	85.1
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)