

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: P547528

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-82-85-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: P547528
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-LD4-4STD-50-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

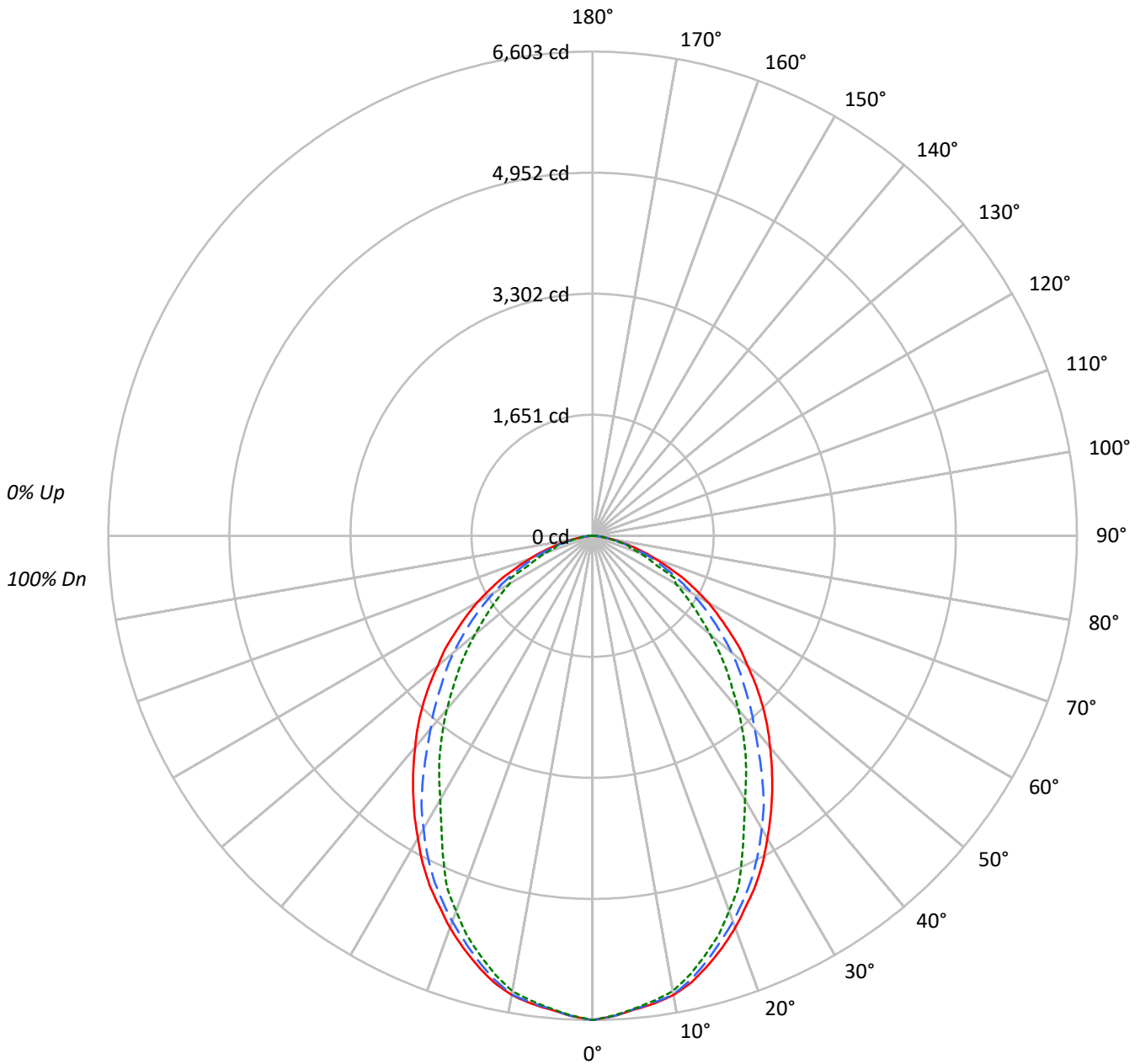
Lumens per Lamp: N/A
Luminaire Lumens: 12963.0 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8885	8885	8885
5°	8764	8753	8743
10°	8688	8677	8615
15°	8454	8368	8252
20°	8143	8012	7793
25°	7808	7638	7162
30°	7401	7164	6452
35°	7009	6620	5968
40°	6610	6034	5430
45°	6232	5578	4910
50°	5768	5177	4378
55°	5336	4692	3922
60°	4889	4191	3513
65°	4302	3670	3111
70°	3544	3213	2643
75°	2818	2460	2580
80°	1893	1774	1656
85°	1178	1414	1650



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	614.7	4.7
10°-20°	1686.9	13.0
20°-30°	2335.4	18.0
30°-40°	2490.2	19.2
40°-50°	2271.8	17.5
50°-60°	1779.8	13.7
60°-70°	1160.0	8.9
70°-80°	513.9	4.0
80°-90°	110.3	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°	4637.0	35.8
0°-40°	7127.2	55.0
0°-60°	11178.8	86.2
0°-90°	12963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12963.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6603	6603	6603	6603	6603	
5°	6489	6481	6481	6473	6473	616
15°	6069	6069	6008	5947	5924	1706
25°	5260	5229	5145	4962	4824	2415
35°	4267	4237	4031	3725	3634	2668
45°	3275	3206	2931	2687	2580	2523
55°	2275	2206	2000	1763	1672	2040
65°	1351	1275	1153	1176	977	1332
75°	542	504	473	450	496	581
85°	76	84	92	99	107	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6603.2	6603.2	6603.2	6603.2	6603.2
2.5°	6557.4	6557.4	6557.4	6549.7	6549.7
5°	6488.7	6481.0	6481.0	6473.4	6473.4
7.5°	6435.2	6427.6	6420.0	6412.3	6397.1
10°	6358.9	6358.9	6351.3	6313.1	6305.5
12.5°	6236.8	6229.1	6198.6	6145.2	6129.9
15°	6068.8	6068.8	6007.7	5946.7	5923.8
17.5°	5885.6	5878.0	5801.6	5740.6	5710.0
20°	5687.1	5671.9	5595.5	5496.3	5442.9
22.5°	5465.8	5465.8	5374.1	5244.4	5190.9
25°	5259.6	5229.1	5145.1	4961.9	4824.5
27.5°	5023.0	4977.2	4885.6	4626.0	4465.7
30°	4763.4	4740.5	4610.8	4274.9	4152.8
32.5°	4519.2	4481.0	4343.6	3992.4	3893.2
35°	4267.3	4236.7	4030.6	3725.3	3633.7
37.5°	4015.3	3977.2	3717.6	3473.3	3358.8
40°	3763.4	3717.6	3435.2	3213.8	3091.7
42.5°	3526.8	3465.7	3190.9	2954.3	2816.8
45°	3274.9	3206.2	2931.4	2687.1	2580.2
47.5°	3023.0	2961.9	2710.0	2458.1	2335.9
50°	2755.8	2702.3	2473.3	2221.4	2091.6
52.5°	2534.4	2450.4	2229.1	1977.1	1870.3
55°	2274.9	2206.1	2000.0	1763.4	1671.8
57.5°	2038.2	1969.5	1778.7	1557.3	1480.9
60°	1816.8	1717.6	1557.3	1366.4	1305.4
62.5°	1572.5	1496.2	1358.8	1198.5	1274.8
65°	1351.2	1274.8	1152.7	1175.6	977.1
67.5°	1106.9	1068.7	961.9	855.0	824.4
70°	900.8	855.0	816.8	702.3	671.8
72.5°	717.6	671.8	618.3	557.3	534.4
75°	542.0	503.8	473.3	450.4	496.2
77.5°	374.1	358.8	335.9	313.0	305.3
80°	244.3	236.6	229.0	221.4	213.7
82.5°	145.0	145.0	145.0	145.0	145.0
85°	76.3	84.0	91.6	99.2	106.9
87.5°	45.8	45.8	53.4	61.1	68.7
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)