

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: P547508

Luminaire Tested: **FMR-24-4-LD4-4STD-40-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: P547508
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

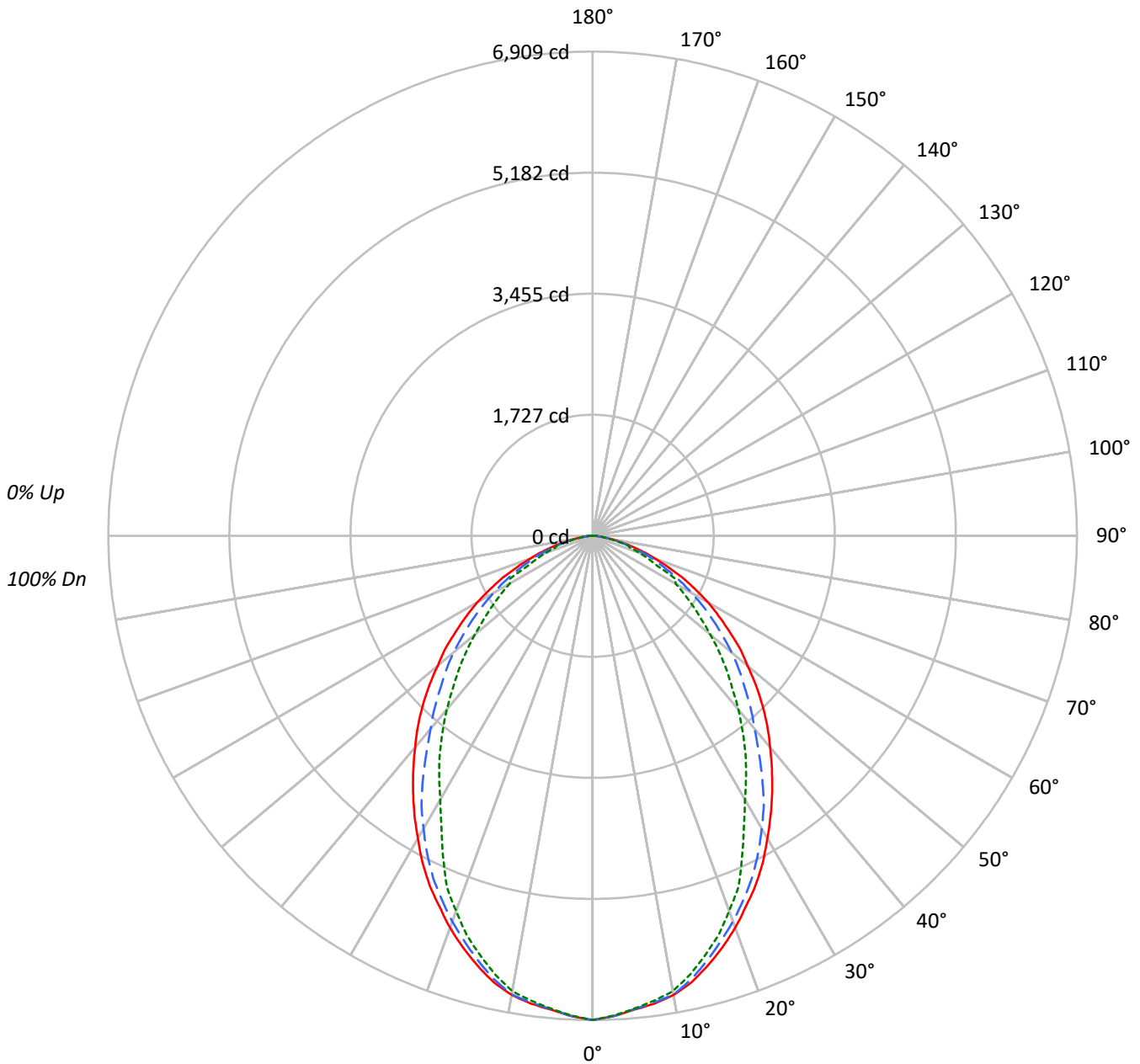
Lumens per Lamp: N/A
Luminaire Lumens: 13564.0 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	9296	9296	9296
5°	9170	9159	9148
10°	9091	9080	9014
15°	8846	8757	8634
20°	8521	8383	8155
25°	8170	7993	7494
30°	7744	7496	6751
35°	7334	6927	6245
40°	6917	6313	5682
45°	6520	5836	5137
50°	6036	5417	4581
55°	5584	4909	4103
60°	5116	4385	3676
65°	4501	3840	3255
70°	3708	3362	2765
75°	2948	2574	2699
80°	1980	1857	1733
85°	1233	1480	1726



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	643.2	4.7
10°-20°	1765.1	13.0
20°-30°	2443.7	18.0
30°-40°	2605.7	19.2
40°-50°	2377.1	17.5
50°-60°	1862.3	13.7
60°-70°	1213.7	8.9
70°-80°	537.7	4.0
80°-90°	115.5	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°	4852.0	35.8
0°-40°	7457.6	55.0
0°-60°	11697.0	86.2
0°-90°	13564.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13564.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6909	6909	6909	6909	6909	
5°	6790	6782	6782	6774	6774	644
15°	6350	6350	6286	6222	6198	1785
25°	5504	5472	5384	5192	5048	2527
35°	4465	4433	4218	3898	3802	2791
45°	3427	3355	3067	2812	2700	2640
55°	2380	2308	2093	1845	1749	2135
65°	1414	1334	1206	1230	1022	1393
75°	567	527	495	471	519	608
85°	80	88	96	104	112	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6909.3	6909.3	6909.3	6909.3	6909.3
2.5°	6861.4	6861.4	6861.4	6853.4	6853.4
5°	6789.5	6781.5	6781.5	6773.5	6773.5
7.5°	6733.6	6725.6	6717.6	6709.6	6693.7
10°	6653.7	6653.7	6645.7	6605.8	6597.8
12.5°	6525.9	6517.9	6486.0	6430.1	6414.1
15°	6350.2	6350.2	6286.3	6222.4	6198.4
17.5°	6158.5	6150.5	6070.6	6006.7	5974.8
20°	5950.8	5934.8	5855.0	5751.1	5695.2
22.5°	5719.2	5719.2	5623.3	5487.5	5431.6
25°	5503.5	5471.5	5383.7	5192.0	5048.2
27.5°	5255.9	5208.0	5112.1	4840.5	4672.8
30°	4984.3	4960.3	4824.5	4473.1	4345.3
32.5°	4728.7	4688.8	4545.0	4177.5	4073.7
35°	4465.1	4433.1	4217.5	3898.0	3802.1
37.5°	4201.5	4161.6	3890.0	3634.4	3514.6
40°	3937.9	3890.0	3594.4	3362.8	3235.0
42.5°	3690.3	3626.4	3338.8	3091.2	2947.4
45°	3426.7	3354.8	3067.3	2811.7	2699.8
47.5°	3163.1	3099.2	2835.6	2572.0	2444.2
50°	2883.5	2827.6	2588.0	2324.4	2188.6
52.5°	2651.9	2564.0	2332.4	2068.8	1957.0
55°	2380.3	2308.4	2092.8	1845.1	1749.3
57.5°	2132.7	2060.8	1861.1	1629.5	1549.6
60°	1901.1	1797.2	1629.5	1429.8	1365.9
62.5°	1645.5	1565.6	1421.8	1254.1	1333.9
65°	1413.8	1333.9	1206.1	1230.1	1022.4
67.5°	1158.2	1118.3	1006.4	894.6	862.7
70°	942.5	894.6	854.7	734.9	702.9
72.5°	750.8	702.9	647.0	583.1	559.1
75°	567.1	527.2	495.2	471.3	519.2
77.5°	391.4	375.4	351.5	327.5	319.5
80°	255.6	247.6	239.6	231.6	223.7
82.5°	151.8	151.8	151.8	151.8	151.8
85°	79.9	87.9	95.9	103.8	111.8
87.5°	47.9	47.9	55.9	63.9	71.9
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)