

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: P547540

Luminaire Tested: **FMR-24-4-LD4-4STD-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: P547540
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-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

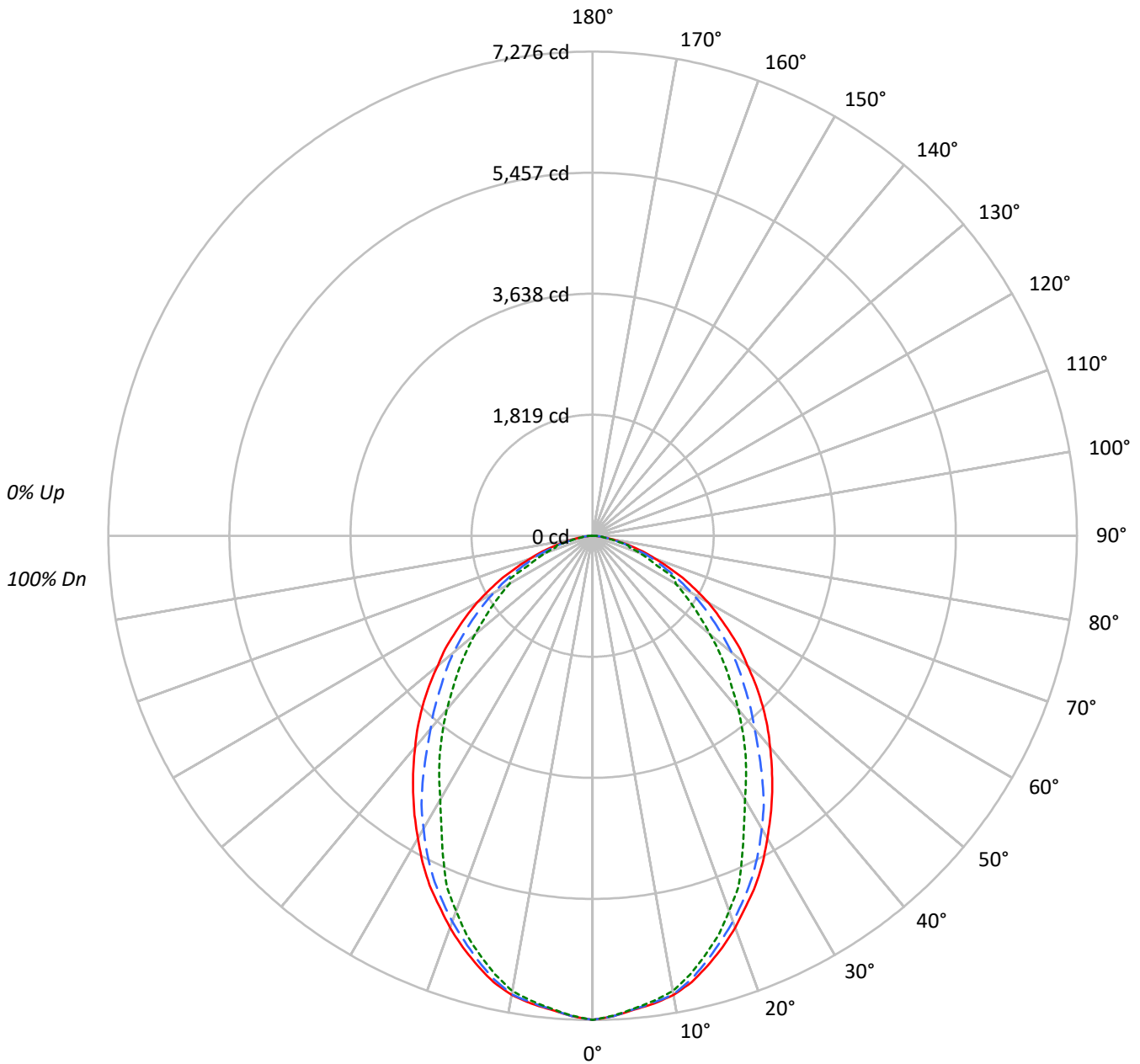
Lumens per Lamp: N/A
Luminaire Lumens: 14283.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	9789	9789	9789
5°	9656	9645	9633
10°	9572	9561	9492
15°	9314	9221	9092
20°	8972	8828	8587
25°	8603	8416	7892
30°	8154	7893	7109
35°	7723	7295	6576
40°	7283	6648	5983
45°	6866	6146	5409
50°	6356	5704	4824
55°	5880	5169	4321
60°	5387	4617	3870
65°	4740	4044	3428
70°	3904	3541	2912
75°	3105	2711	2842
80°	2086	1955	1825
85°	1298	1558	1819



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	677.3	4.7
10°-20°	1858.7	13.0
20°-30°	2573.2	18.0
30°-40°	2743.8	19.2
40°-50°	2503.1	17.5
50°-60°	1961.0	13.7
60°-70°	1278.1	8.9
70°-80°	566.2	4.0
80°-90°	121.6	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°	5109.1	35.8
0°-40°	7852.9	55.0
0°-60°	12317.1	86.2
0°-90°	14283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14283.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7276	7276	7276	7276	7276	
5°	7149	7141	7141	7133	7133	679
15°	6687	6687	6620	6552	6527	1880
25°	5795	5762	5669	5467	5316	2661
35°	4702	4668	4441	4105	4004	2939
45°	3608	3533	3230	2961	2843	2779
55°	2506	2431	2204	1943	1842	2248
65°	1489	1405	1270	1295	1077	1467
75°	597	555	522	496	547	640
85°	84	92	101	109	118	117
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7275.6	7275.6	7275.6	7275.6	7275.6
2.5°	7225.1	7225.1	7225.1	7216.7	7216.7
5°	7149.4	7141.0	7141.0	7132.6	7132.6
7.5°	7090.5	7082.1	7073.7	7065.3	7048.5
10°	7006.4	7006.4	6998.0	6955.9	6947.5
12.5°	6871.8	6863.4	6829.8	6770.9	6754.1
15°	6686.8	6686.8	6619.5	6552.2	6527.0
17.5°	6484.9	6476.5	6392.4	6325.1	6291.5
20°	6266.2	6249.4	6165.3	6056.0	5997.1
22.5°	6022.3	6022.3	5921.4	5778.4	5719.5
25°	5795.2	5761.6	5669.1	5467.2	5315.8
27.5°	5534.5	5484.0	5383.1	5097.1	4920.5
30°	5248.5	5223.3	5080.3	4710.2	4575.6
32.5°	4979.3	4937.3	4785.9	4399.0	4289.6
35°	4701.8	4668.1	4441.0	4104.6	4003.7
37.5°	4424.2	4382.2	4096.2	3827.0	3700.9
40°	4146.7	4096.2	3785.0	3541.1	3406.5
42.5°	3885.9	3818.6	3515.8	3255.1	3103.7
45°	3608.3	3532.6	3229.8	2960.7	2842.9
47.5°	3330.8	3263.5	2985.9	2708.4	2573.8
50°	3036.4	2977.5	2725.2	2447.6	2304.6
52.5°	2792.5	2700.0	2456.0	2178.5	2060.7
55°	2506.5	2430.8	2203.7	1943.0	1842.0
57.5°	2245.8	2170.1	1959.8	1715.9	1631.7
60°	2001.8	1892.5	1715.9	1505.6	1438.3
62.5°	1732.7	1648.6	1497.2	1320.5	1404.6
65°	1488.8	1404.6	1270.1	1295.3	1076.6
67.5°	1219.6	1177.5	1059.8	942.0	908.4
70°	992.5	942.0	900.0	773.8	740.2
72.5°	790.6	740.2	681.3	614.0	588.8
75°	597.2	555.1	521.5	496.3	546.7
77.5°	412.1	395.3	370.1	344.9	336.4
80°	269.2	260.7	252.3	243.9	235.5
82.5°	159.8	159.8	159.8	159.8	159.8
85°	84.1	92.5	100.9	109.3	117.8
87.5°	50.5	50.5	58.9	67.3	75.7
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)