

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: P547216

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-93-85-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: P547216
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-LD4-3STD-40-UNV-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

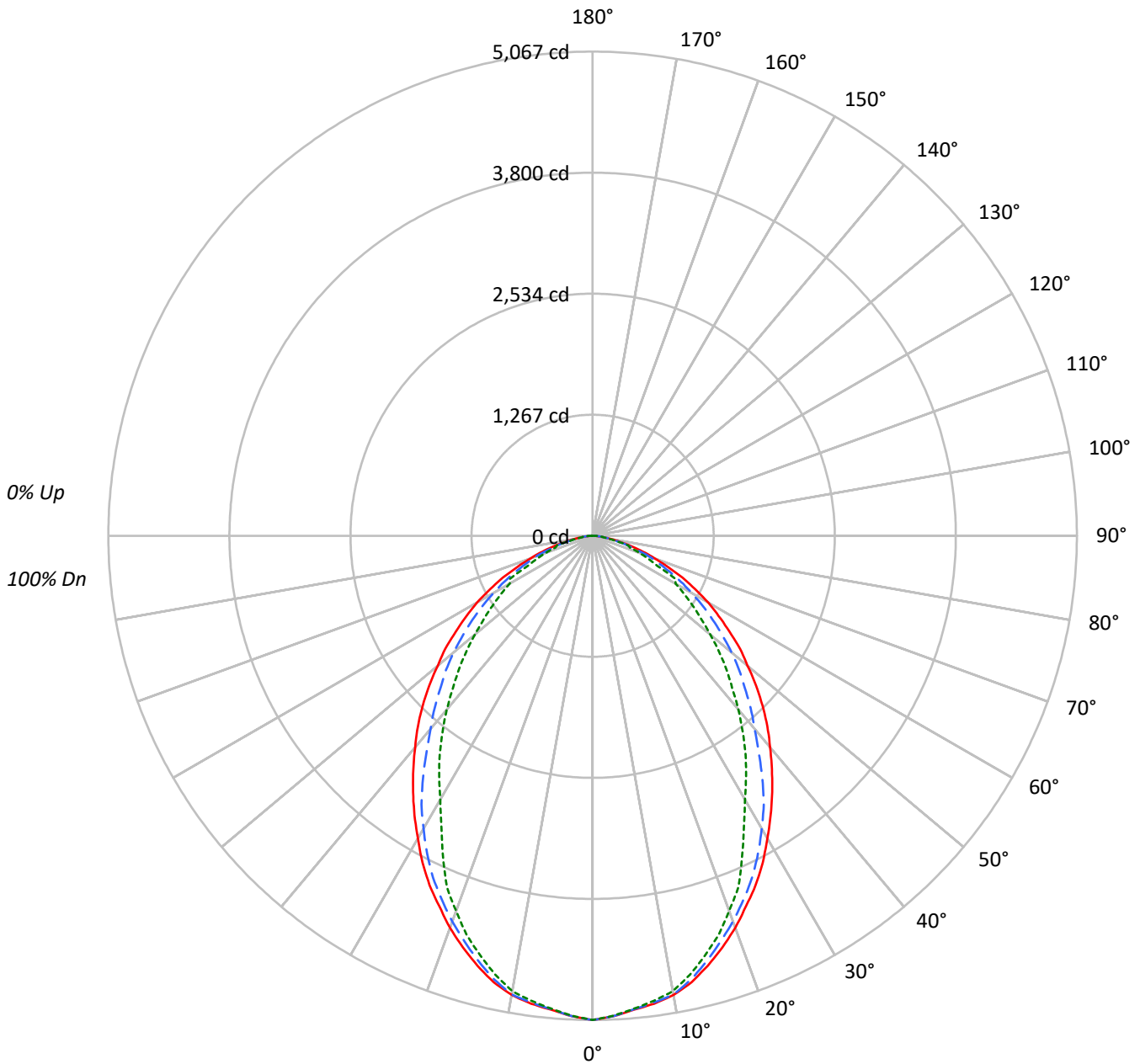
Lumens per Lamp: N/A
Luminaire Lumens: 9948.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6818	6818	6818
5°	6725	6717	6710
10°	6667	6659	6611
15°	6487	6422	6332
20°	6249	6148	5981
25°	5992	5862	5497
30°	5679	5497	4951
35°	5379	5081	4580
40°	5073	4630	4167
45°	4782	4281	3768
50°	4427	3973	3360
55°	4095	3601	3010
60°	3752	3216	2696
65°	3301	2816	2387
70°	2720	2466	2028
75°	2162	1888	1980
80°	1453	1361	1271
85°	905	1085	1266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.7	4.7
10°-20°	1294.6	13.0
20°-30°	1792.2	18.0
30°-40°	1911.0	19.2
40°-50°	1743.4	17.5
50°-60°	1365.8	13.7
60°-70°	890.2	8.9
70°-80°	394.4	4.0
80°-90°	84.7	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°	3558.5	35.8
0°-40°	5469.5	55.0
0°-60°	8578.8	86.2
0°-90°	9948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5067	5067	5067	5067	5067	
5°	4980	4974	4974	4968	4968	473
15°	4657	4657	4610	4564	4546	1309
25°	4036	4013	3948	3808	3702	1853
35°	3275	3251	3093	2859	2788	2047
45°	2513	2460	2250	2062	1980	1936
55°	1746	1693	1535	1353	1283	1566
65°	1037	978	885	902	750	1022
75°	416	387	363	346	381	446
85°	59	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5067.4	5067.4	5067.4	5067.4	5067.4
2.5°	5032.2	5032.2	5032.2	5026.4	5026.4
5°	4979.5	4973.6	4973.6	4967.8	4967.8
7.5°	4938.5	4932.6	4926.8	4920.9	4909.2
10°	4879.9	4879.9	4874.1	4844.8	4838.9
12.5°	4786.2	4780.3	4756.9	4715.9	4704.2
15°	4657.3	4657.3	4610.4	4563.6	4546.0
17.5°	4516.7	4510.8	4452.3	4405.4	4382.0
20°	4364.4	4352.7	4294.1	4217.9	4176.9
22.5°	4194.5	4194.5	4124.2	4024.6	3983.6
25°	4036.3	4012.9	3948.5	3807.9	3702.4
27.5°	3854.7	3819.6	3749.3	3550.1	3427.1
30°	3655.5	3638.0	3538.4	3280.6	3186.9
32.5°	3468.1	3438.8	3333.3	3063.9	2987.7
35°	3274.8	3251.3	3093.2	2858.8	2788.5
37.5°	3081.4	3052.1	2853.0	2665.5	2577.6
40°	2888.1	2853.0	2636.2	2466.3	2372.6
42.5°	2706.5	2659.6	2448.7	2267.1	2161.7
45°	2513.2	2460.5	2249.6	2062.1	1980.1
47.5°	2319.9	2273.0	2079.7	1886.4	1792.6
50°	2114.8	2073.8	1898.1	1704.7	1605.2
52.5°	1944.9	1880.5	1710.6	1517.3	1435.3
55°	1745.8	1693.0	1534.9	1353.3	1283.0
57.5°	1564.2	1511.4	1365.0	1195.1	1136.5
60°	1394.3	1318.1	1195.1	1048.6	1001.8
62.5°	1206.8	1148.2	1042.8	919.7	978.3
65°	1036.9	978.3	884.6	902.2	749.9
67.5°	849.4	820.2	738.1	656.1	632.7
70°	691.3	656.1	626.8	539.0	515.5
72.5°	550.7	515.5	474.5	427.7	410.1
75°	415.9	386.6	363.2	345.6	380.8
77.5°	287.1	275.3	257.8	240.2	234.3
80°	187.5	181.6	175.7	169.9	164.0
82.5°	111.3	111.3	111.3	111.3	111.3
85°	58.6	64.4	70.3	76.2	82.0
87.5°	35.1	35.1	41.0	46.9	52.7
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)