

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: P547186

Luminaire Tested: **FMR-24-4-LD4-3STD-35-UNV-93-87-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: P547186
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-35-UNV-93-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

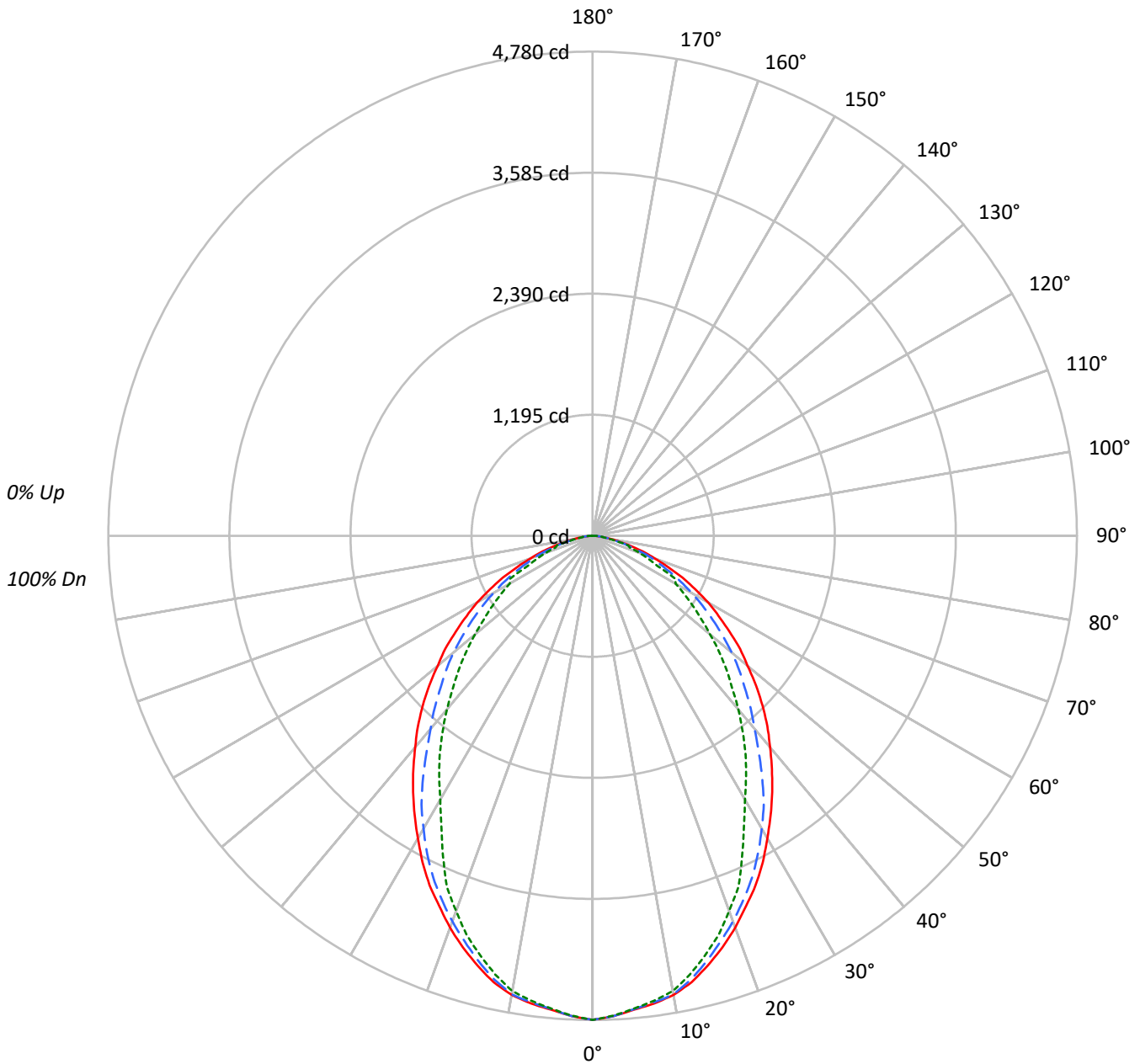
Lumens per Lamp: N/A
Luminaire Lumens: 9383.0 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6431	6431	6431
5°	6343	6336	6329
10°	6289	6281	6236
15°	6119	6057	5973
20°	5894	5799	5641
25°	5652	5529	5184
30°	5357	5185	4670
35°	5073	4792	4320
40°	4785	4367	3930
45°	4510	4037	3554
50°	4175	3747	3169
55°	3863	3396	2839
60°	3539	3033	2543
65°	3114	2656	2252
70°	2565	2326	1913
75°	2039	1781	1867
80°	1370	1285	1199
85°	854	1024	1195



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	444.9	4.7
10°-20°	1221.0	13.0
20°-30°	1690.4	18.0
30°-40°	1802.5	19.2
40°-50°	1644.4	17.5
50°-60°	1288.3	13.7
60°-70°	839.6	8.9
70°-80°	372.0	4.0
80°-90°	79.9	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°	3356.4	35.8
0°-40°	5158.9	55.0
0°-60°	8091.5	86.2
0°-90°	9383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9383.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4780	4780	4780	4780	4780	
5°	4697	4691	4691	4686	4686	446
15°	4393	4393	4349	4304	4288	1235
25°	3807	3785	3724	3592	3492	1748
35°	3089	3067	2918	2696	2630	1931
45°	2370	2321	2122	1945	1868	1826
55°	1647	1597	1448	1276	1210	1477
65°	978	923	834	851	707	964
75°	392	365	343	326	359	420
85°	55	61	66	72	77	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4779.6	4779.6	4779.6	4779.6	4779.6
2.5°	4746.4	4746.4	4746.4	4740.9	4740.9
5°	4696.7	4691.2	4691.2	4685.6	4685.6
7.5°	4658.0	4652.5	4647.0	4641.4	4630.4
10°	4602.8	4602.8	4597.2	4569.6	4564.1
12.5°	4514.3	4508.8	4486.7	4448.0	4437.0
15°	4392.8	4392.8	4348.6	4304.4	4287.8
17.5°	4260.2	4254.7	4199.4	4155.2	4133.1
20°	4116.5	4105.5	4050.2	3978.4	3939.7
22.5°	3956.3	3956.3	3890.0	3796.0	3757.4
25°	3807.1	3785.0	3724.2	3591.6	3492.1
27.5°	3635.8	3602.6	3536.3	3348.5	3232.4
30°	3447.9	3431.3	3337.4	3094.3	3005.9
32.5°	3271.1	3243.5	3144.0	2889.8	2818.0
35°	3088.8	3066.7	2917.5	2696.5	2630.1
37.5°	2906.4	2878.8	2690.9	2514.1	2431.2
40°	2724.1	2690.9	2486.5	2326.2	2237.8
42.5°	2552.8	2508.6	2309.7	2138.4	2038.9
45°	2370.4	2320.7	2121.8	1945.0	1867.6
47.5°	2188.1	2143.9	1961.6	1779.2	1690.8
50°	1994.7	1956.0	1790.3	1607.9	1514.0
52.5°	1834.5	1773.7	1613.5	1431.1	1353.8
55°	1646.6	1596.9	1447.7	1276.4	1210.1
57.5°	1475.3	1425.6	1287.4	1127.2	1072.0
60°	1315.1	1243.2	1127.2	989.1	944.9
62.5°	1138.3	1083.0	983.5	867.5	922.8
65°	978.0	922.8	834.4	850.9	707.3
67.5°	801.2	773.6	696.2	618.9	596.8
70°	652.0	618.9	591.2	508.3	486.2
72.5°	519.4	486.2	447.6	403.4	386.8
75°	392.3	364.7	342.6	326.0	359.2
77.5°	270.8	259.7	243.1	226.5	221.0
80°	176.8	171.3	165.8	160.2	154.7
82.5°	105.0	105.0	105.0	105.0	105.0
85°	55.3	60.8	66.3	71.8	77.4
87.5°	33.2	33.2	38.7	44.2	49.7
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)