

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: P546685

Luminaire Tested: **FMR-24-4-LD4-2HI-35-UNV-80-96-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: P546685
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-LD4-2HI-35-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

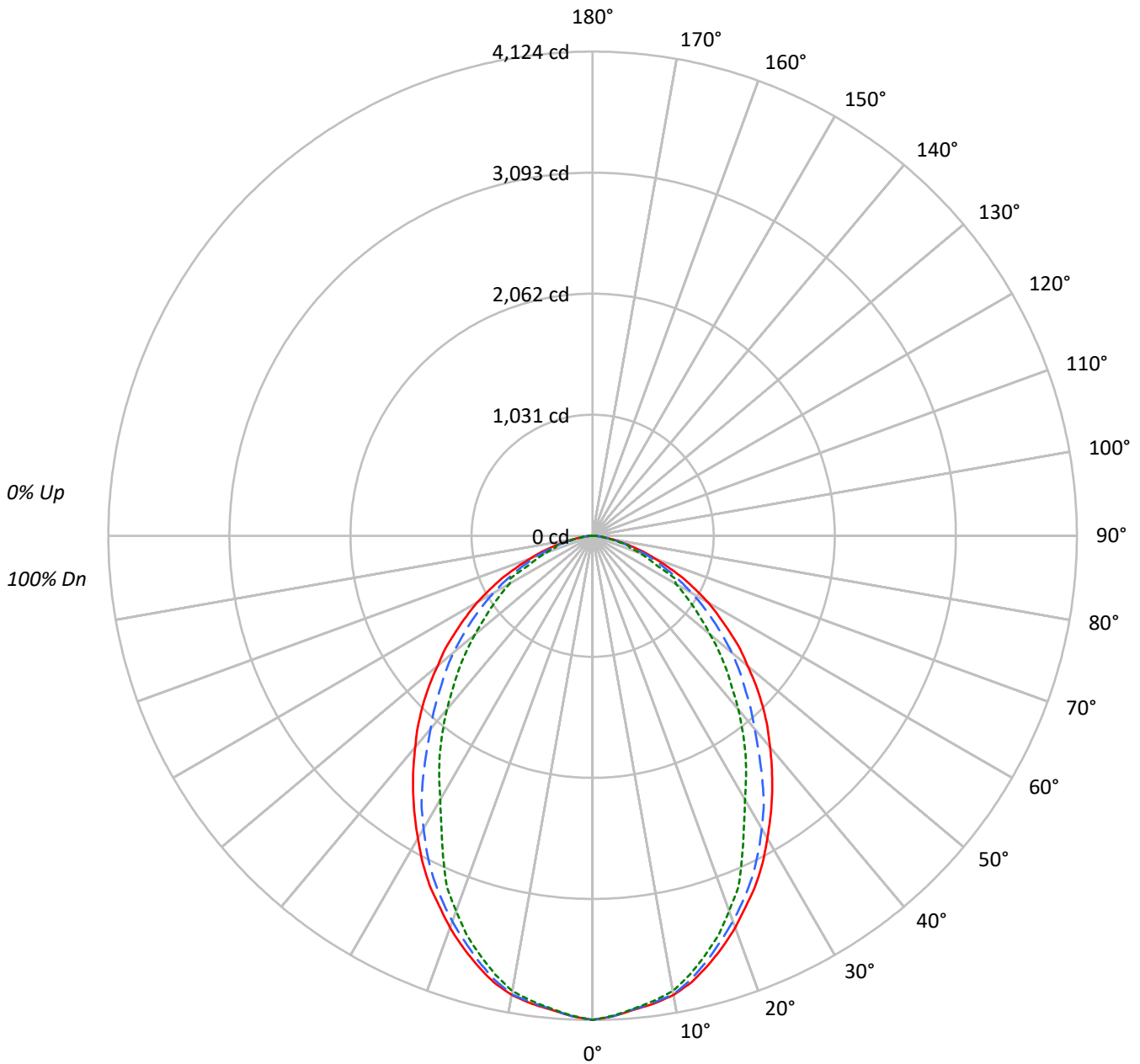
Lumens per Lamp: N/A
Luminaire Lumens: 8095.0 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	5548	5548	5548
5°	5473	5466	5460
10°	5425	5419	5380
15°	5279	5226	5153
20°	5085	5003	4867
25°	4876	4770	4473
30°	4621	4473	4029
35°	4377	4134	3727
40°	4128	3768	3391
45°	3891	3483	3066
50°	3602	3233	2734
55°	3332	2930	2449
60°	3053	2617	2194
65°	2686	2292	1943
70°	2213	2007	1650
75°	1760	1537	1611
80°	1182	1108	1034
85°	736	883	1030



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	383.8	4.7
10°-20°	1053.4	13.0
20°-30°	1458.4	18.0
30°-40°	1555.1	19.2
40°-50°	1418.7	17.5
50°-60°	1111.4	13.7
60°-70°	724.4	8.9
70°-80°	320.9	4.0
80°-90°	68.9	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°	2895.6	35.8
0°-40°	4450.7	55.0
0°-60°	6980.8	86.2
0°-90°	8095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8095.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4124	4124	4124	4124	4124	
5°	4052	4047	4047	4042	4042	385
15°	3790	3790	3752	3714	3699	1065
25°	3284	3265	3213	3099	3013	1508
35°	2665	2646	2517	2326	2269	1666
45°	2045	2002	1830	1678	1611	1575
55°	1421	1378	1249	1101	1044	1274
65°	844	796	720	734	610	832
75°	338	315	296	281	310	363
85°	48	52	57	62	67	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4123.5	4123.5	4123.5	4123.5	4123.5
2.5°	4094.9	4094.9	4094.9	4090.1	4090.1
5°	4052.0	4047.2	4047.2	4042.4	4042.4
7.5°	4018.6	4013.8	4009.1	4004.3	3994.8
10°	3970.9	3970.9	3966.2	3942.3	3937.6
12.5°	3894.7	3889.9	3870.8	3837.5	3827.9
15°	3789.8	3789.8	3751.7	3713.5	3699.2
17.5°	3675.4	3670.6	3622.9	3584.8	3565.7
20°	3551.4	3541.9	3494.2	3432.3	3398.9
22.5°	3413.2	3413.2	3356.0	3275.0	3241.6
25°	3284.5	3265.4	3213.0	3098.6	3012.8
27.5°	3136.7	3108.1	3050.9	2888.8	2788.7
30°	2974.6	2960.3	2879.3	2669.5	2593.3
32.5°	2822.1	2798.2	2712.4	2493.2	2431.2
35°	2664.8	2645.7	2517.0	2326.3	2269.1
37.5°	2507.5	2483.6	2321.5	2169.0	2097.5
40°	2350.1	2321.5	2145.2	2006.9	1930.6
42.5°	2202.4	2164.2	1992.6	1844.8	1759.0
45°	2045.1	2002.2	1830.5	1678.0	1611.3
47.5°	1887.7	1849.6	1692.3	1535.0	1458.7
50°	1720.9	1687.5	1544.5	1387.2	1306.2
52.5°	1582.7	1530.2	1392.0	1234.7	1167.9
55°	1420.6	1377.7	1249.0	1101.2	1044.0
57.5°	1272.8	1229.9	1110.7	972.5	924.8
60°	1134.6	1072.6	972.5	853.3	815.2
62.5°	982.0	934.3	848.5	748.4	796.1
65°	843.8	796.1	719.8	734.1	610.2
67.5°	691.2	667.4	600.6	533.9	514.8
70°	562.5	533.9	510.1	438.6	419.5
72.5°	448.1	419.5	386.1	348.0	333.7
75°	338.5	314.6	295.6	281.3	309.9
77.5°	233.6	224.1	209.7	195.4	190.7
80°	152.5	147.8	143.0	138.2	133.5
82.5°	90.6	90.6	90.6	90.6	90.6
85°	47.7	52.4	57.2	62.0	66.7
87.5°	28.6	28.6	33.4	38.1	42.9
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)