

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: P546746

Luminaire Tested: **FMR-24-4-LD4-2HI-50-UNV-80-87-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: P546746
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-50-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

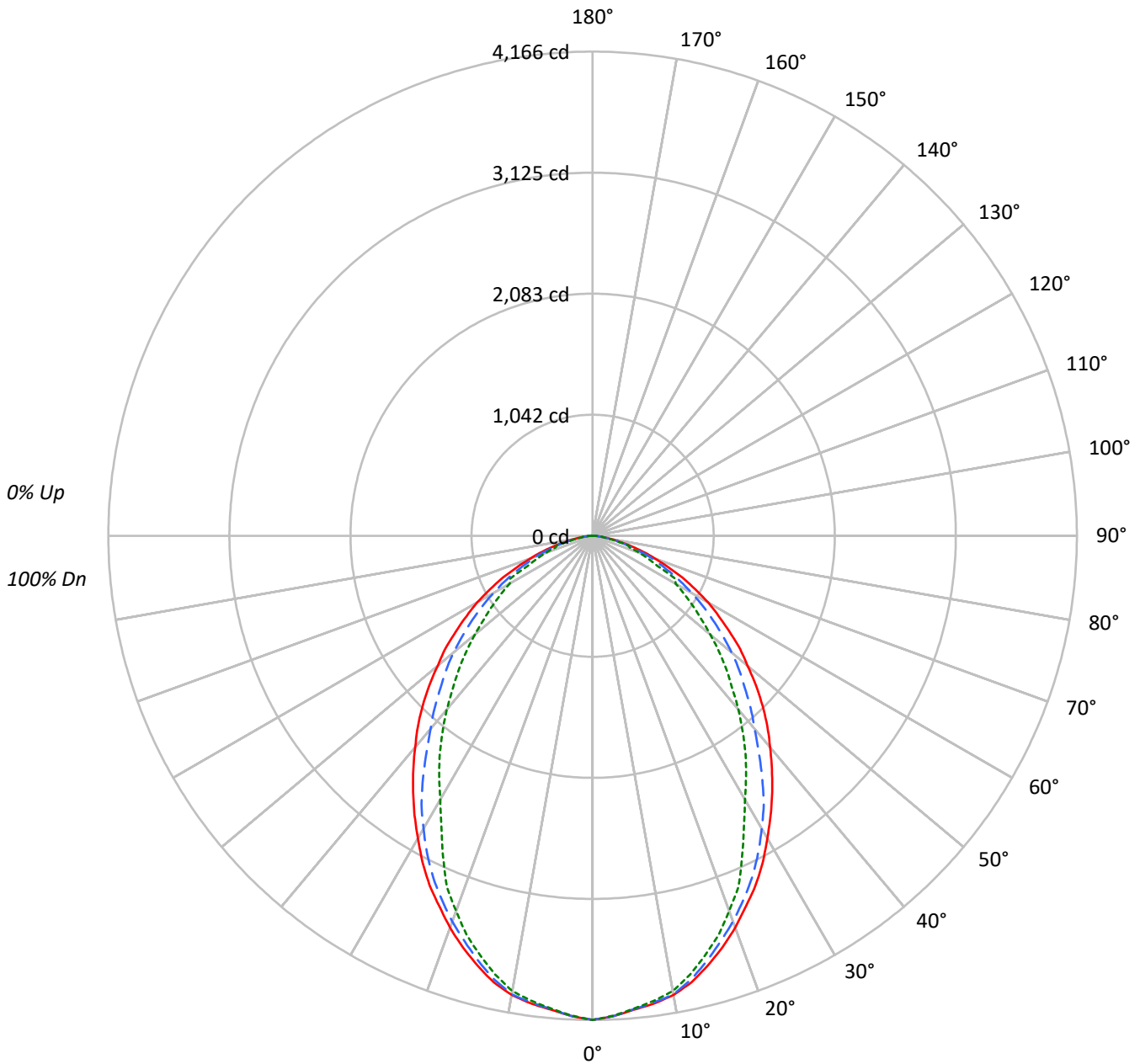
Lumens per Lamp: N/A
Luminaire Lumens: 8178.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (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°	5605	5605	5605
5°	5529	5522	5516
10°	5481	5474	5435
15°	5333	5279	5206
20°	5137	5055	4917
25°	4926	4819	4519
30°	4669	4519	4070
35°	4422	4177	3765
40°	4170	3806	3426
45°	3931	3519	3097
50°	3639	3266	2762
55°	3366	2960	2474
60°	3084	2644	2216
65°	2714	2315	1962
70°	2236	2027	1667
75°	1777	1552	1627
80°	1194	1120	1044
85°	744	892	1041



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	387.8	4.7
10°-20°	1064.2	13.0
20°-30°	1473.3	18.0
30°-40°	1571.0	19.2
40°-50°	1433.2	17.5
50°-60°	1122.8	13.7
60°-70°	731.8	8.9
70°-80°	324.2	4.0
80°-90°	69.6	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°	2925.3	35.8
0°-40°	4496.3	55.0
0°-60°	7052.4	86.2
0°-90°	8178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4166	4166	4166	4166	4166	
5°	4094	4089	4089	4084	4084	389
15°	3829	3829	3790	3752	3737	1076
25°	3318	3299	3246	3130	3044	1523
35°	2692	2673	2543	2350	2292	1683
45°	2066	2023	1849	1695	1628	1591
55°	1435	1392	1262	1112	1055	1287
65°	852	804	727	742	616	840
75°	342	318	299	284	313	366
85°	48	53	58	63	67	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4165.8	4165.8	4165.8	4165.8	4165.8
2.5°	4136.9	4136.9	4136.9	4132.1	4132.1
5°	4093.5	4088.7	4088.7	4083.9	4083.9
7.5°	4059.8	4055.0	4050.2	4045.4	4035.7
10°	4011.7	4011.7	4006.8	3982.8	3977.9
12.5°	3934.6	3929.8	3910.5	3876.8	3867.2
15°	3828.7	3828.7	3790.1	3751.6	3737.1
17.5°	3713.1	3708.3	3660.1	3621.6	3602.3
20°	3587.9	3578.2	3530.1	3467.5	3433.7
22.5°	3448.2	3448.2	3390.4	3308.5	3274.8
25°	3318.2	3298.9	3245.9	3130.3	3043.7
27.5°	3168.9	3140.0	3082.2	2918.4	2817.3
30°	3005.1	2990.7	2908.8	2696.9	2619.9
32.5°	2851.0	2826.9	2740.3	2518.7	2456.1
35°	2692.1	2672.8	2542.8	2350.2	2292.4
37.5°	2533.2	2509.1	2345.3	2191.2	2119.0
40°	2374.2	2345.3	2167.2	2027.5	1950.4
42.5°	2225.0	2186.4	2013.1	1863.8	1777.1
45°	2066.0	2022.7	1849.3	1695.2	1627.8
47.5°	1907.1	1868.6	1709.6	1550.7	1473.7
50°	1738.5	1704.8	1560.4	1401.4	1319.6
52.5°	1598.9	1545.9	1406.2	1247.3	1179.9
55°	1435.1	1391.8	1261.8	1112.5	1054.7
57.5°	1285.8	1242.5	1122.1	982.4	934.3
60°	1146.2	1083.6	982.4	862.0	823.5
62.5°	992.1	943.9	857.2	756.1	804.3
65°	852.4	804.3	727.2	741.7	616.4
67.5°	698.3	674.2	606.8	539.4	520.1
70°	568.3	539.4	515.3	443.1	423.8
72.5°	452.7	423.8	390.1	351.6	337.1
75°	341.9	317.9	298.6	284.1	313.0
77.5°	236.0	226.3	211.9	197.5	192.6
80°	154.1	149.3	144.5	139.7	134.8
82.5°	91.5	91.5	91.5	91.5	91.5
85°	48.2	53.0	57.8	62.6	67.4
87.5°	28.9	28.9	33.7	38.5	43.3
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)