

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: P546999

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-80-84-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: P546999
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-LD4-3HI-40-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

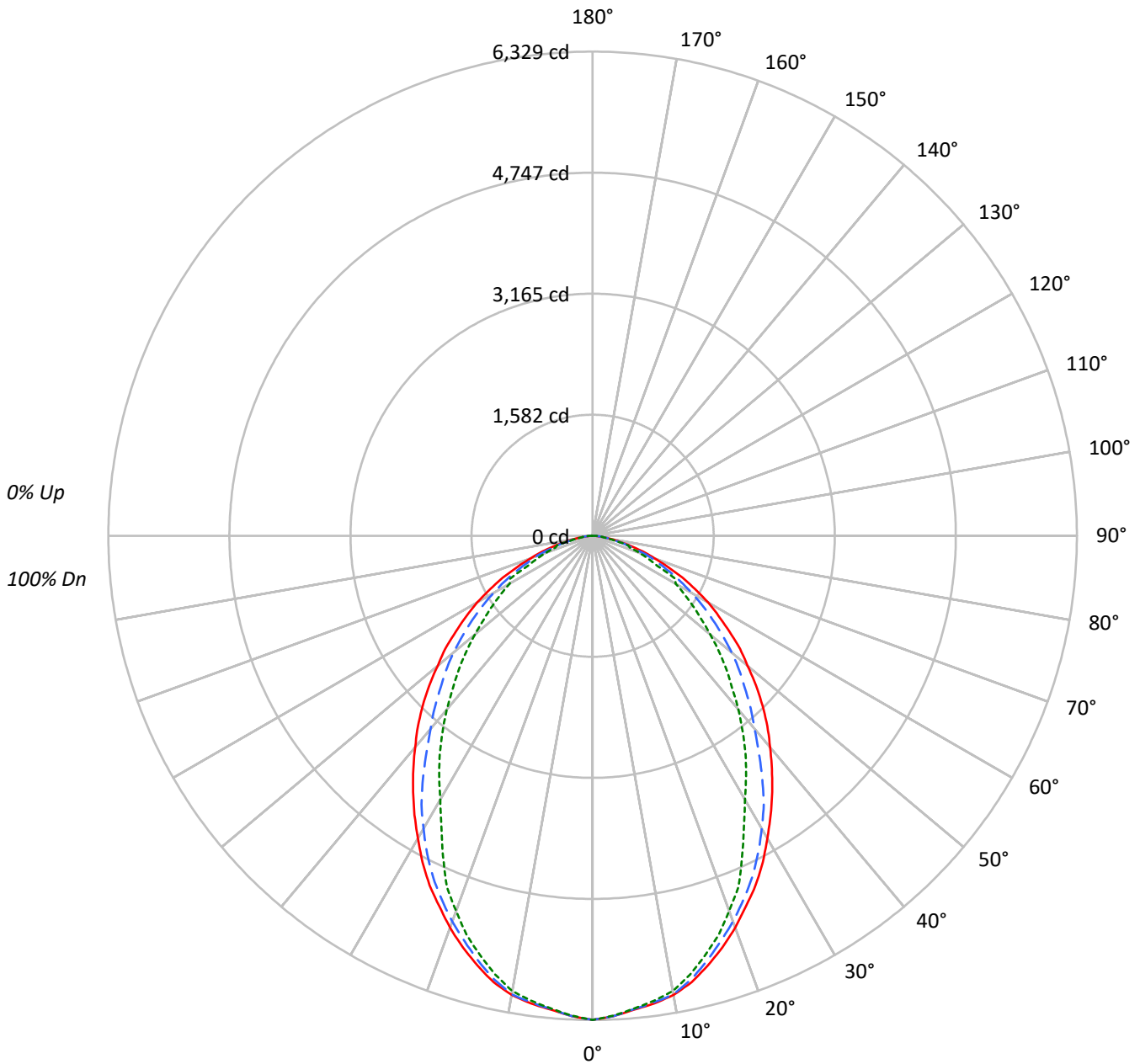
Lumens per Lamp: N/A
Luminaire Lumens: 12424.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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

TEST NUMBER: P546999

CATALOG NUMBER: FMR-24-4-LD4-3HI-40-UNV-80-84-EDD

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°	8515	8515	8515
5°	8399	8390	8380
10°	8327	8317	8257
15°	8102	8020	7908
20°	7805	7679	7469
25°	7484	7321	6865
30°	7093	6866	6184
35°	6718	6345	5720
40°	6335	5783	5204
45°	5972	5346	4705
50°	5529	4962	4196
55°	5115	4497	3759
60°	4686	4016	3367
65°	4123	3517	2982
70°	3396	3079	2533
75°	2701	2358	2472
80°	1814	1701	1588
85°	1130	1355	1581



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	589.1	4.7
10°-20°	1616.8	13.0
20°-30°	2238.3	18.0
30°-40°	2386.7	19.2
40°-50°	2177.3	17.5
50°-60°	1705.8	13.7
60°-70°	1111.7	8.9
70°-80°	492.6	4.0
80°-90°	105.7	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°	4444.2	35.8
0°-40°	6830.8	55.0
0°-60°	10714.0	86.2
0°-90°	12424.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12424.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6329	6329	6329	6329	6329	
5°	6219	6212	6212	6204	6204	590
15°	5816	5816	5758	5699	5678	1635
25°	5041	5012	4931	4756	4624	2314
35°	4090	4061	3863	3570	3483	2557
45°	3139	3073	2810	2575	2473	2418
55°	2180	2114	1917	1690	1602	1956
65°	1295	1222	1105	1127	936	1276
75°	520	483	454	432	476	557
85°	73	80	88	95	102	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6328.6	6328.6	6328.6	6328.6	6328.6
2.5°	6284.7	6284.7	6284.7	6277.4	6277.4
5°	6218.9	6211.6	6211.6	6204.2	6204.2
7.5°	6167.7	6160.3	6153.0	6145.7	6131.1
10°	6094.5	6094.5	6087.2	6050.6	6043.3
12.5°	5977.4	5970.1	5940.9	5889.6	5875.0
15°	5816.5	5816.5	5757.9	5699.4	5677.5
17.5°	5640.9	5633.6	5560.4	5501.9	5472.6
20°	5450.7	5436.0	5362.9	5267.8	5216.5
22.5°	5238.5	5238.5	5150.7	5026.3	4975.1
25°	5040.9	5011.7	4931.2	4755.6	4623.9
27.5°	4814.1	4770.2	4682.4	4433.7	4280.0
30°	4565.4	4543.4	4419.1	4097.1	3980.1
32.5°	4331.3	4294.7	4163.0	3826.4	3731.3
35°	4089.8	4060.6	3863.0	3570.4	3482.6
37.5°	3848.4	3811.8	3563.0	3328.9	3219.2
40°	3606.9	3563.0	3292.3	3080.2	2963.1
42.5°	3380.1	3321.6	3058.2	2831.4	2699.7
45°	3138.7	3072.9	2809.5	2575.3	2472.9
47.5°	2897.3	2838.7	2597.3	2355.9	2238.8
50°	2641.2	2590.0	2370.5	2129.1	2004.7
52.5°	2429.0	2348.5	2136.4	1894.9	1792.5
55°	2180.3	2114.4	1916.9	1690.1	1602.3
57.5°	1953.5	1887.6	1704.7	1492.5	1419.4
60°	1741.3	1646.2	1492.5	1309.6	1251.1
62.5°	1507.2	1434.0	1302.3	1148.7	1221.8
65°	1295.0	1221.8	1104.8	1126.7	936.5
67.5°	1060.9	1024.3	921.9	819.4	790.2
70°	863.3	819.4	782.8	673.1	643.8
72.5°	687.7	643.8	592.6	534.1	512.1
75°	519.5	482.9	453.6	431.7	475.6
77.5°	358.5	343.9	321.9	300.0	292.7
80°	234.1	226.8	219.5	212.2	204.9
82.5°	139.0	139.0	139.0	139.0	139.0
85°	73.2	80.5	87.8	95.1	102.4
87.5°	43.9	43.9	51.2	58.5	65.8
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)