

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: P547035

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-80-88-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: P547035
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-50-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

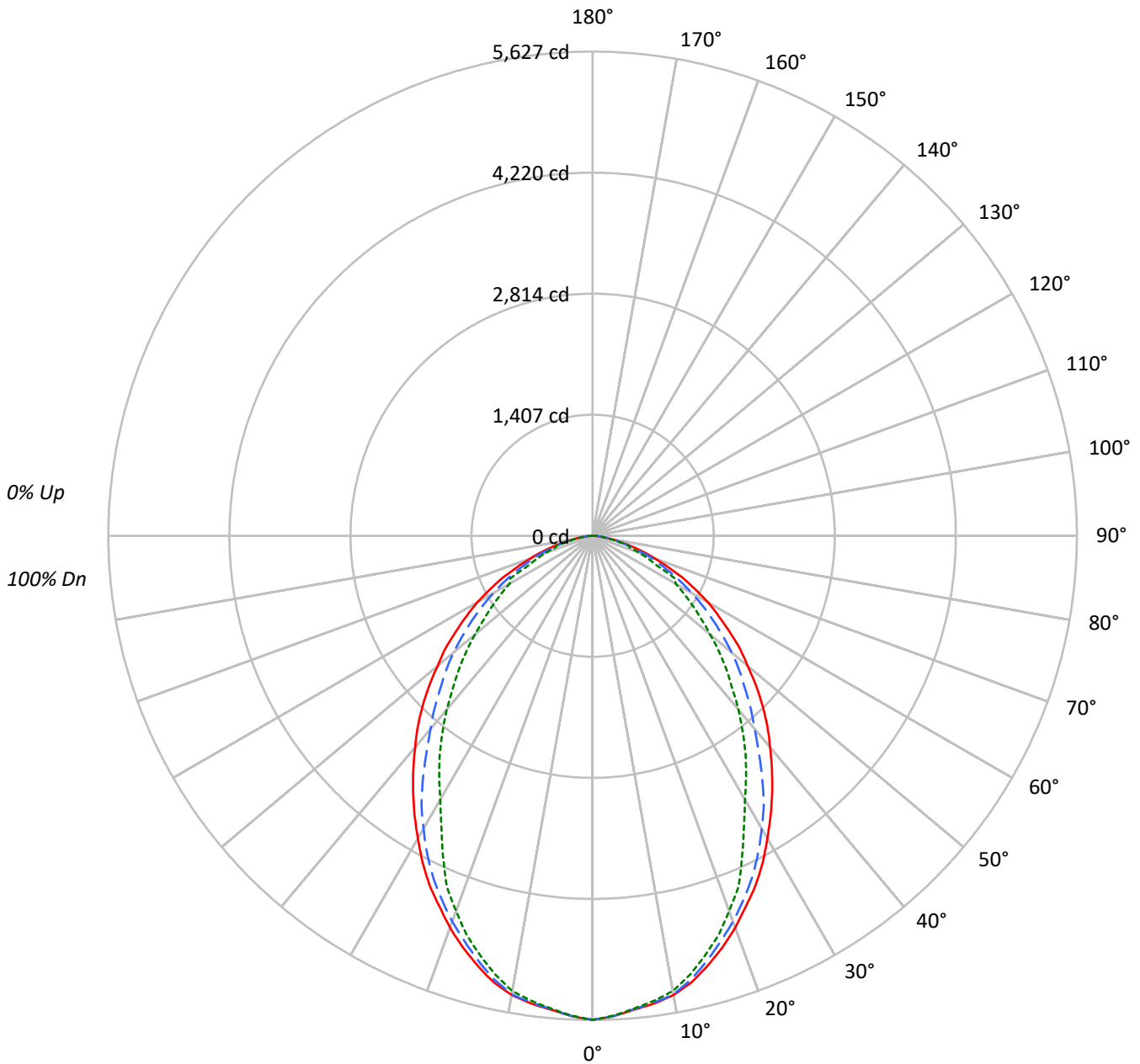
Lumens per Lamp: N/A
Luminaire Lumens: 11046.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P547035

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-80-88-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°	7571	7571	7571
5°	7468	7459	7450
10°	7403	7394	7341
15°	7203	7131	7031
20°	6939	6827	6641
25°	6654	6509	6103
30°	6306	6104	5498
35°	5973	5641	5086
40°	5633	5141	4627
45°	5310	4753	4184
50°	4915	4412	3731
55°	4547	3998	3342
60°	4166	3571	2993
65°	3666	3127	2651
70°	3020	2738	2252
75°	2401	2097	2198
80°	1613	1512	1411
85°	1003	1206	1406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	523.8	4.7
10°-20°	1437.4	13.0
20°-30°	1990.0	18.0
30°-40°	2122.0	19.2
40°-50°	1935.8	17.5
50°-60°	1516.6	13.7
60°-70°	988.4	8.9
70°-80°	437.9	4.0
80°-90°	94.0	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°	3951.2	35.8
0°-40°	6073.2	55.0
0°-60°	9525.6	86.2
0°-90°	11046.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11046.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5627	5627	5627	5627	5627	
5°	5529	5523	5523	5516	5516	525
15°	5171	5171	5119	5067	5048	1454
25°	4482	4456	4384	4228	4111	2058
35°	3636	3610	3435	3174	3096	2273
45°	2791	2732	2498	2290	2199	2150
55°	1938	1880	1704	1503	1425	1739
65°	1151	1086	982	1002	833	1135
75°	462	429	403	384	423	495
85°	65	72	78	85	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5626.7	5626.7	5626.7	5626.7	5626.7
2.5°	5587.7	5587.7	5587.7	5581.2	5581.2
5°	5529.1	5522.6	5522.6	5516.1	5516.1
7.5°	5483.6	5477.1	5470.6	5464.1	5451.1
10°	5418.5	5418.5	5412.0	5379.5	5373.0
12.5°	5314.5	5307.9	5281.9	5236.4	5223.4
15°	5171.3	5171.3	5119.3	5067.3	5047.8
17.5°	5015.2	5008.7	4943.7	4891.6	4865.6
20°	4846.1	4833.1	4768.0	4683.5	4637.9
22.5°	4657.5	4657.5	4579.4	4468.8	4423.3
25°	4481.8	4455.8	4384.3	4228.1	4111.1
27.5°	4280.2	4241.2	4163.1	3941.9	3805.3
30°	4059.0	4039.5	3928.9	3642.7	3538.6
32.5°	3850.9	3818.3	3701.3	3402.0	3317.5
35°	3636.2	3610.2	3434.6	3174.4	3096.3
37.5°	3421.5	3389.0	3167.9	2959.7	2862.1
40°	3206.9	3167.9	2927.2	2738.5	2634.5
42.5°	3005.2	2953.2	2719.0	2517.4	2400.3
45°	2790.6	2732.0	2497.9	2289.7	2198.6
47.5°	2575.9	2523.9	2309.2	2094.6	1990.5
50°	2348.2	2302.7	2107.6	1892.9	1782.3
52.5°	2159.6	2088.1	1899.4	1684.8	1593.7
55°	1938.4	1879.9	1704.3	1502.6	1424.6
57.5°	1736.8	1678.2	1515.6	1327.0	1261.9
60°	1548.2	1463.6	1327.0	1164.4	1112.3
62.5°	1340.0	1274.9	1157.9	1021.3	1086.3
65°	1151.4	1086.3	982.2	1001.7	832.6
67.5°	943.2	910.7	819.6	728.5	702.5
70°	767.6	728.5	696.0	598.4	572.4
72.5°	611.5	572.4	526.9	474.9	455.3
75°	461.8	429.3	403.3	383.8	422.8
77.5°	318.7	305.7	286.2	266.7	260.2
80°	208.2	201.6	195.1	188.6	182.1
82.5°	123.6	123.6	123.6	123.6	123.6
85°	65.0	71.6	78.1	84.6	91.1
87.5°	39.0	39.0	45.5	52.0	58.5
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)