

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: P547224

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-80-85-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: P547224
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-50-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

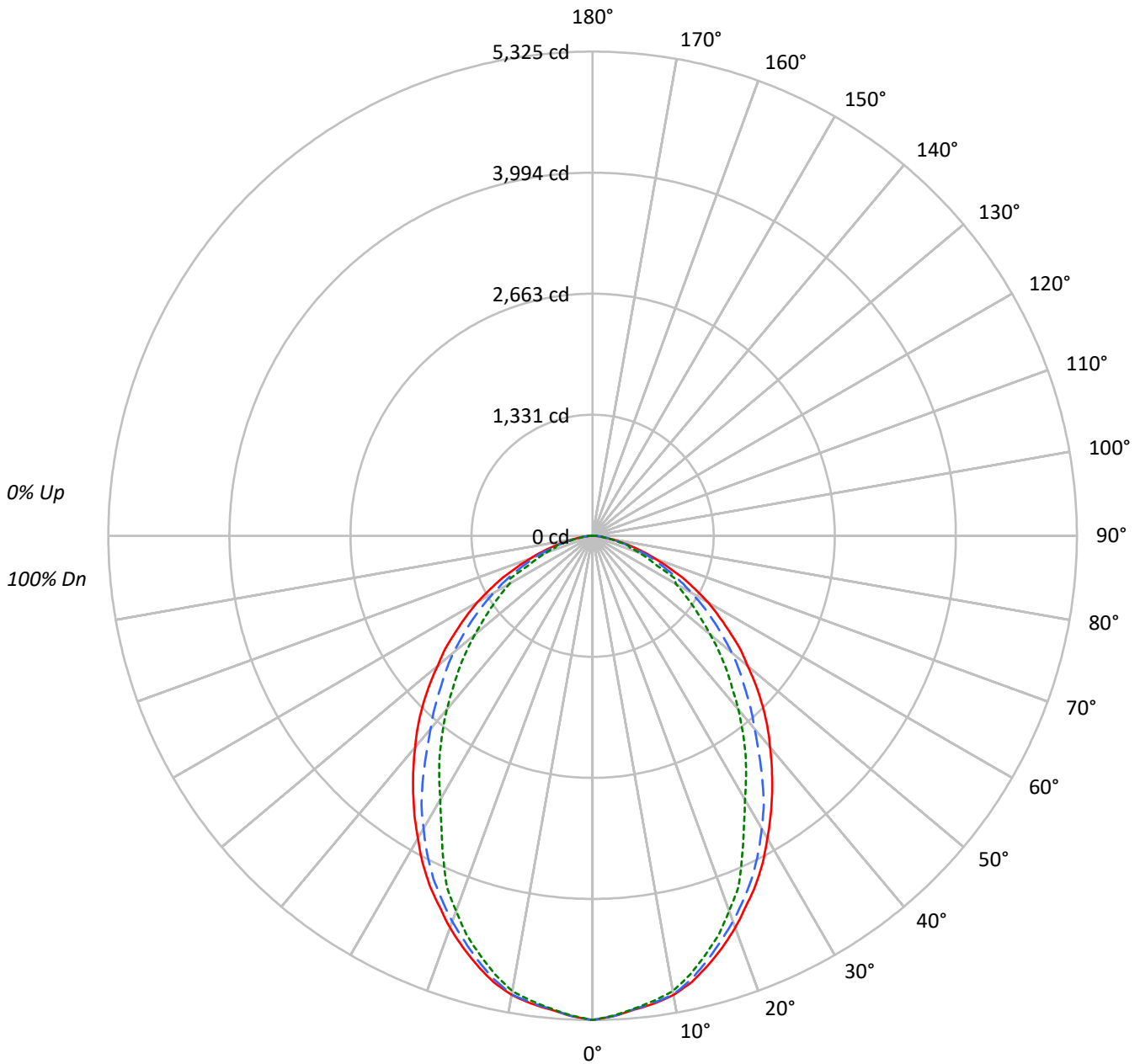
Lumens per Lamp: N/A
Luminaire Lumens: 10454.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P547224

CATALOG NUMBER: FMR-24-4-LD4-3STD-50-UNV-80-85-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°	7165	7165	7165
5°	7068	7059	7051
10°	7006	6998	6947
15°	6817	6749	6654
20°	6567	6461	6285
25°	6297	6160	5776
30°	5968	5777	5203
35°	5652	5339	4813
40°	5331	4866	4379
45°	5025	4498	3959
50°	4652	4175	3531
55°	4304	3784	3163
60°	3943	3380	2833
65°	3469	2960	2509
70°	2858	2591	2131
75°	2272	1984	2080
80°	1526	1431	1336
85°	951	1141	1331



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	495.7	4.7
10°-20°	1360.4	13.0
20°-30°	1883.4	18.0
30°-40°	2008.2	19.2
40°-50°	1832.1	17.5
50°-60°	1435.3	13.7
60°-70°	935.5	8.9
70°-80°	414.4	4.0
80°-90°	89.0	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°	3739.5	35.8
0°-40°	5747.7	55.0
0°-60°	9015.1	86.2
0°-90°	10454.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10454.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5325	5325	5325	5325	5325	
5°	5233	5227	5227	5220	5220	497
15°	4894	4894	4845	4796	4777	1376
25°	4242	4217	4149	4002	3891	1947
35°	3441	3417	3250	3004	2930	2151
45°	2641	2586	2364	2167	2081	2034
55°	1835	1779	1613	1422	1348	1645
65°	1090	1028	930	948	788	1074
75°	437	406	382	363	400	468
85°	62	68	74	80	86	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5325.1	5325.1	5325.1	5325.1	5325.1
2.5°	5288.2	5288.2	5288.2	5282.0	5282.0
5°	5232.8	5226.6	5226.6	5220.5	5220.5
7.5°	5189.7	5183.5	5177.4	5171.2	5158.9
10°	5128.1	5128.1	5122.0	5091.2	5085.0
12.5°	5029.6	5023.5	4998.8	4955.8	4943.4
15°	4894.2	4894.2	4844.9	4795.7	4777.2
17.5°	4746.4	4740.3	4678.7	4629.5	4604.9
20°	4586.4	4574.1	4512.5	4432.5	4389.4
22.5°	4407.9	4407.9	4334.0	4229.3	4186.2
25°	4241.6	4217.0	4149.3	4001.5	3890.7
27.5°	4050.8	4013.9	3940.0	3730.7	3601.4
30°	3841.5	3823.0	3718.4	3447.5	3349.0
32.5°	3644.5	3613.7	3502.9	3219.7	3139.7
35°	3441.3	3416.7	3250.5	3004.2	2930.4
37.5°	3238.2	3207.4	2998.1	2801.1	2708.7
40°	3035.0	2998.1	2770.3	2591.8	2493.3
42.5°	2844.2	2794.9	2573.3	2382.5	2271.6
45°	2641.0	2585.6	2364.0	2167.0	2080.8
47.5°	2437.9	2388.6	2185.5	1982.3	1883.8
50°	2222.4	2179.3	1994.6	1791.5	1686.8
52.5°	2043.9	1976.1	1797.6	1594.5	1508.3
55°	1834.6	1779.1	1612.9	1422.1	1348.2
57.5°	1643.7	1588.3	1434.4	1255.9	1194.3
60°	1465.2	1385.1	1255.9	1102.0	1052.7
62.5°	1268.2	1206.6	1095.8	966.5	1028.1
65°	1089.7	1028.1	929.6	948.1	788.0
67.5°	892.7	861.9	775.7	689.5	664.9
70°	726.4	689.5	658.7	566.4	541.7
72.5°	578.7	541.7	498.7	449.4	430.9
75°	437.1	406.3	381.7	363.2	400.2
77.5°	301.7	289.3	270.9	252.4	246.2
80°	197.0	190.8	184.7	178.5	172.4
82.5°	117.0	117.0	117.0	117.0	117.0
85°	61.6	67.7	73.9	80.0	86.2
87.5°	36.9	36.9	43.1	49.2	55.4
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)