

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: P547419

Luminaire Tested: **FMR-24-4-LD4-4LO-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: P547419
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-LD4-4LO-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

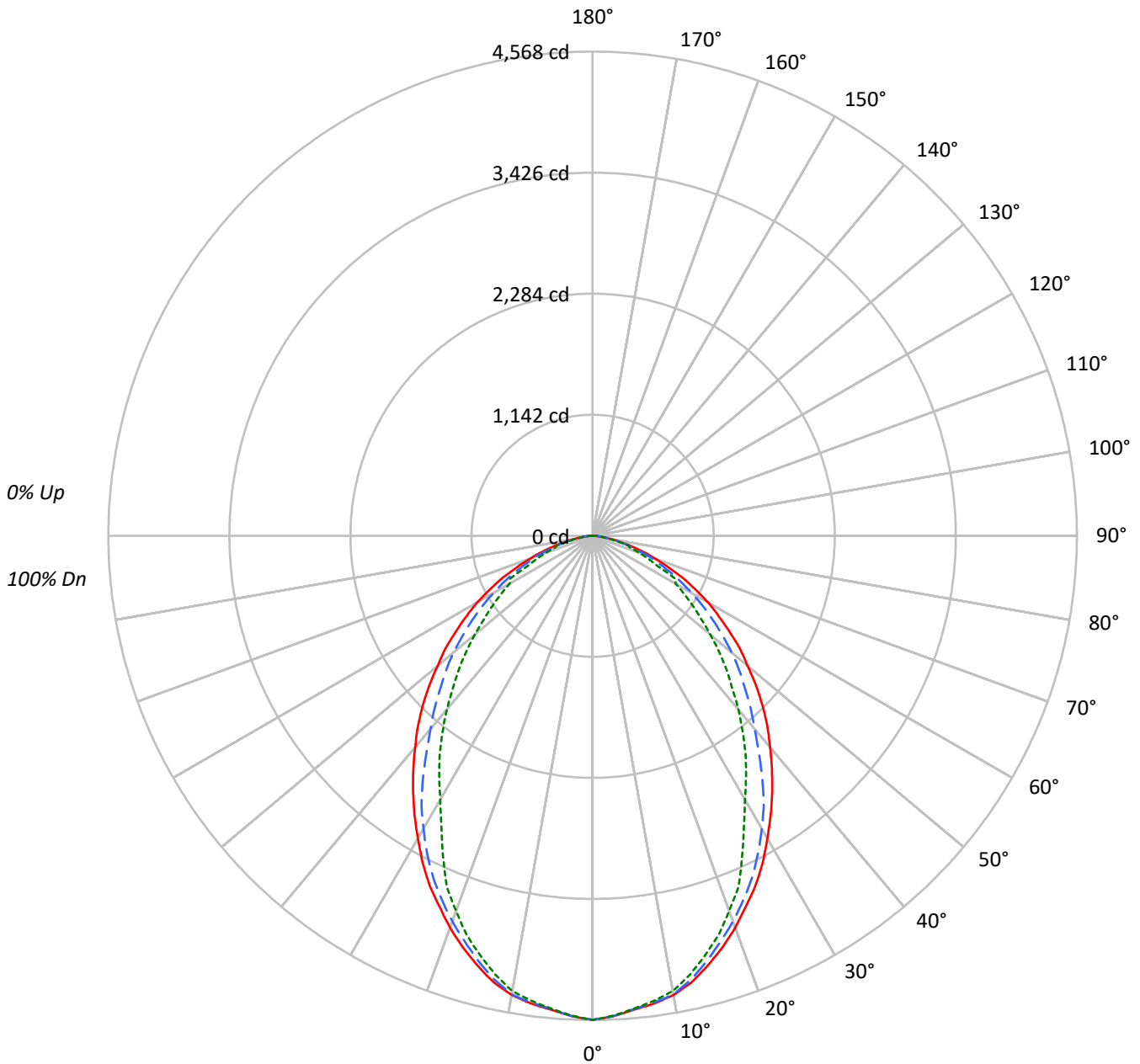
Lumens per Lamp: N/A
Luminaire Lumens: 8967.0 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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

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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°	6146	6146	6146
5°	6062	6055	6048
10°	6010	6002	5959
15°	5848	5789	5708
20°	5633	5542	5391
25°	5401	5284	4954
30°	5119	4955	4463
35°	4848	4580	4129
40°	4572	4174	3756
45°	4311	3858	3396
50°	3990	3581	3029
55°	3691	3245	2713
60°	3382	2899	2430
65°	2976	2539	2152
70°	2451	2223	1828
75°	1949	1702	1784
80°	1309	1227	1146
85°	815	979	1141



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.2	4.7
10°-20°	1166.9	13.0
20°-30°	1615.5	18.0
30°-40°	1722.6	19.2
40°-50°	1571.5	17.5
50°-60°	1231.1	13.7
60°-70°	802.4	8.9
70°-80°	355.5	4.0
80°-90°	76.3	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°	3207.6	35.8
0°-40°	4930.1	55.0
0°-60°	7732.8	86.2
0°-90°	8967.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8967.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4568	4568	4568	4568	4568	
5°	4488	4483	4483	4478	4478	426
15°	4198	4198	4156	4114	4098	1180
25°	3638	3617	3559	3432	3337	1670
35°	2952	2931	2788	2577	2514	1845
45°	2265	2218	2028	1859	1785	1745
55°	1574	1526	1384	1220	1156	1411
65°	935	882	797	813	676	921
75°	375	348	327	312	343	402
85°	53	58	63	69	74	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4567.7	4567.7	4567.7	4567.7	4567.7
2.5°	4536.0	4536.0	4536.0	4530.7	4530.7
5°	4488.5	4483.2	4483.2	4477.9	4477.9
7.5°	4451.5	4446.2	4440.9	4435.7	4425.1
10°	4398.7	4398.7	4393.4	4367.0	4361.7
12.5°	4314.2	4308.9	4287.8	4250.8	4240.3
15°	4198.0	4198.0	4155.8	4113.5	4097.7
17.5°	4071.3	4066.0	4013.2	3971.0	3949.8
20°	3934.0	3923.4	3870.6	3802.0	3765.0
22.5°	3780.9	3780.9	3717.5	3627.7	3590.8
25°	3638.3	3617.2	3559.1	3432.4	3337.3
27.5°	3474.6	3442.9	3379.5	3200.0	3089.1
30°	3295.1	3279.2	3189.4	2957.1	2872.6
32.5°	3126.1	3099.7	3004.6	2761.7	2693.1
35°	2951.8	2930.7	2788.1	2576.9	2513.5
37.5°	2777.6	2751.2	2571.6	2402.6	2323.4
40°	2603.3	2571.6	2376.2	2223.1	2138.6
42.5°	2439.6	2397.4	2207.3	2043.6	1948.5
45°	2265.4	2217.8	2027.7	1858.8	1784.8
47.5°	2091.1	2048.9	1874.6	1700.3	1615.8
50°	1906.3	1869.3	1710.9	1536.6	1446.9
52.5°	1753.1	1695.1	1541.9	1367.7	1293.7
55°	1573.6	1526.1	1383.5	1219.8	1156.4
57.5°	1409.9	1362.4	1230.4	1077.2	1024.4
60°	1256.8	1188.1	1077.2	945.2	903.0
62.5°	1087.8	1035.0	939.9	829.0	881.9
65°	934.7	881.9	797.4	813.2	675.9
67.5°	765.7	739.3	665.3	591.4	570.3
70°	623.1	591.4	565.0	485.8	464.7
72.5°	496.4	464.7	427.7	385.5	369.6
75°	374.9	348.5	327.4	311.6	343.2
77.5°	258.7	248.2	232.3	216.5	211.2
80°	169.0	163.7	158.4	153.1	147.9
82.5°	100.3	100.3	100.3	100.3	100.3
85°	52.8	58.1	63.4	68.6	73.9
87.5°	31.7	31.7	37.0	42.2	47.5
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)