

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: P547407

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-93-84-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: P547407
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-40-UNV-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

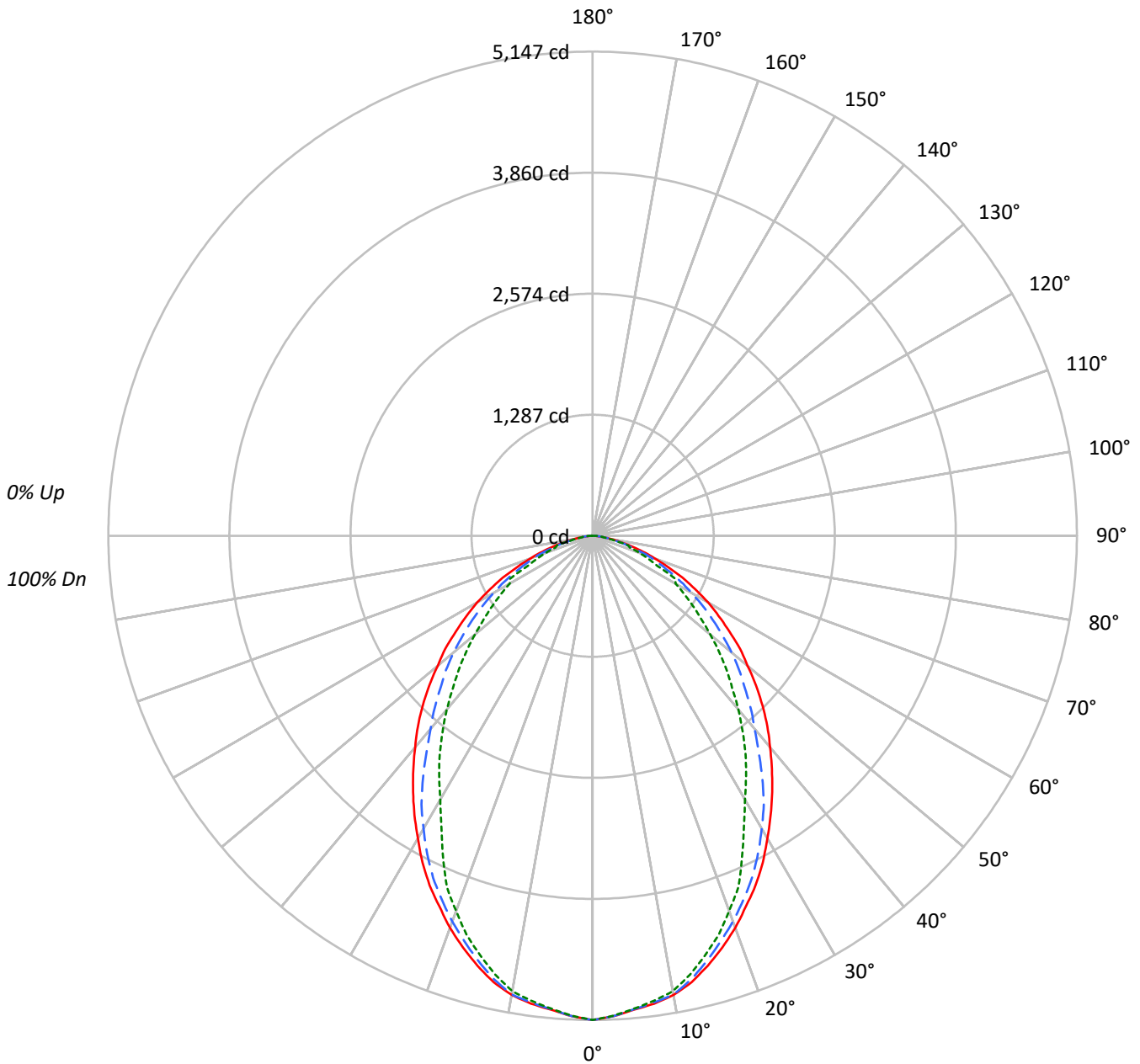
Lumens per Lamp: N/A
Luminaire Lumens: 10105.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6926	6926	6926
5°	6832	6824	6816
10°	6772	6764	6716
15°	6590	6523	6432
20°	6348	6246	6075
25°	6087	5954	5583
30°	5769	5584	5029
35°	5464	5161	4652
40°	5153	4703	4233
45°	4857	4348	3827
50°	4497	4036	3413
55°	4160	3657	3057
60°	3811	3267	2738
65°	3353	2861	2425
70°	2762	2505	2060
75°	2196	1918	2011
80°	1475	1383	1291
85°	919	1102	1286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	479.1	4.7
10°-20°	1315.0	13.0
20°-30°	1820.5	18.0
30°-40°	1941.2	19.2
40°-50°	1770.9	17.5
50°-60°	1387.4	13.7
60°-70°	904.2	8.9
70°-80°	400.6	4.0
80°-90°	86.0	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°	3614.6	35.8
0°-40°	5555.8	55.0
0°-60°	8714.1	86.2
0°-90°	10105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5147	5147	5147	5147	5147	
5°	5058	5052	5052	5046	5046	480
15°	4731	4731	4683	4636	4618	1330
25°	4100	4076	4011	3868	3761	1882
35°	3326	3303	3142	2904	2832	2080
45°	2553	2499	2285	2095	2011	1966
55°	1773	1720	1559	1375	1303	1591
65°	1053	994	899	916	762	1038
75°	422	393	369	351	387	453
85°	60	66	71	77	83	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5147.4	5147.4	5147.4	5147.4	5147.4
2.5°	5111.6	5111.6	5111.6	5105.7	5105.7
5°	5058.1	5052.1	5052.1	5046.2	5046.2
7.5°	5016.4	5010.5	5004.5	4998.6	4986.7
10°	4956.9	4956.9	4951.0	4921.2	4915.3
12.5°	4861.7	4855.8	4832.0	4790.3	4778.4
15°	4730.8	4730.8	4683.2	4635.6	4617.7
17.5°	4588.0	4582.0	4522.5	4474.9	4451.1
20°	4433.3	4421.4	4361.9	4284.5	4242.8
22.5°	4260.7	4260.7	4189.3	4088.1	4046.5
25°	4100.0	4076.2	4010.8	3868.0	3760.8
27.5°	3915.6	3879.9	3808.4	3606.1	3481.2
30°	3713.2	3695.4	3594.2	3332.4	3237.2
32.5°	3522.8	3493.1	3385.9	3112.2	3034.9
35°	3326.4	3302.6	3142.0	2903.9	2832.5
37.5°	3130.1	3100.3	2898.0	2707.6	2618.3
40°	2933.7	2898.0	2677.8	2505.2	2410.0
42.5°	2749.2	2701.6	2487.4	2302.9	2195.8
45°	2552.8	2499.3	2285.1	2094.6	2011.3
47.5°	2356.5	2308.9	2112.5	1916.1	1820.9
50°	2148.2	2106.5	1928.0	1731.7	1630.5
52.5°	1975.6	1910.2	1737.6	1541.2	1457.9
55°	1773.3	1719.8	1559.1	1374.6	1303.2
57.5°	1588.8	1535.3	1386.5	1213.9	1154.4
60°	1416.3	1338.9	1213.9	1065.2	1017.6
62.5°	1225.8	1166.3	1059.2	934.3	993.8
65°	1053.3	993.8	898.6	916.4	761.7
67.5°	862.9	833.1	749.8	666.5	642.7
70°	702.2	666.5	636.7	547.5	523.7
72.5°	559.4	523.7	482.0	434.4	416.5
75°	422.5	392.7	368.9	351.1	386.8
77.5°	291.6	279.7	261.8	244.0	238.0
80°	190.4	184.5	178.5	172.6	166.6
82.5°	113.1	113.1	113.1	113.1	113.1
85°	59.5	65.5	71.4	77.4	83.3
87.5°	35.7	35.7	41.7	47.6	53.6
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)