

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: P547535

Luminaire Tested: **FMR-24-4-LD4-4STD-50-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: P547535
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-LD4-4STD-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

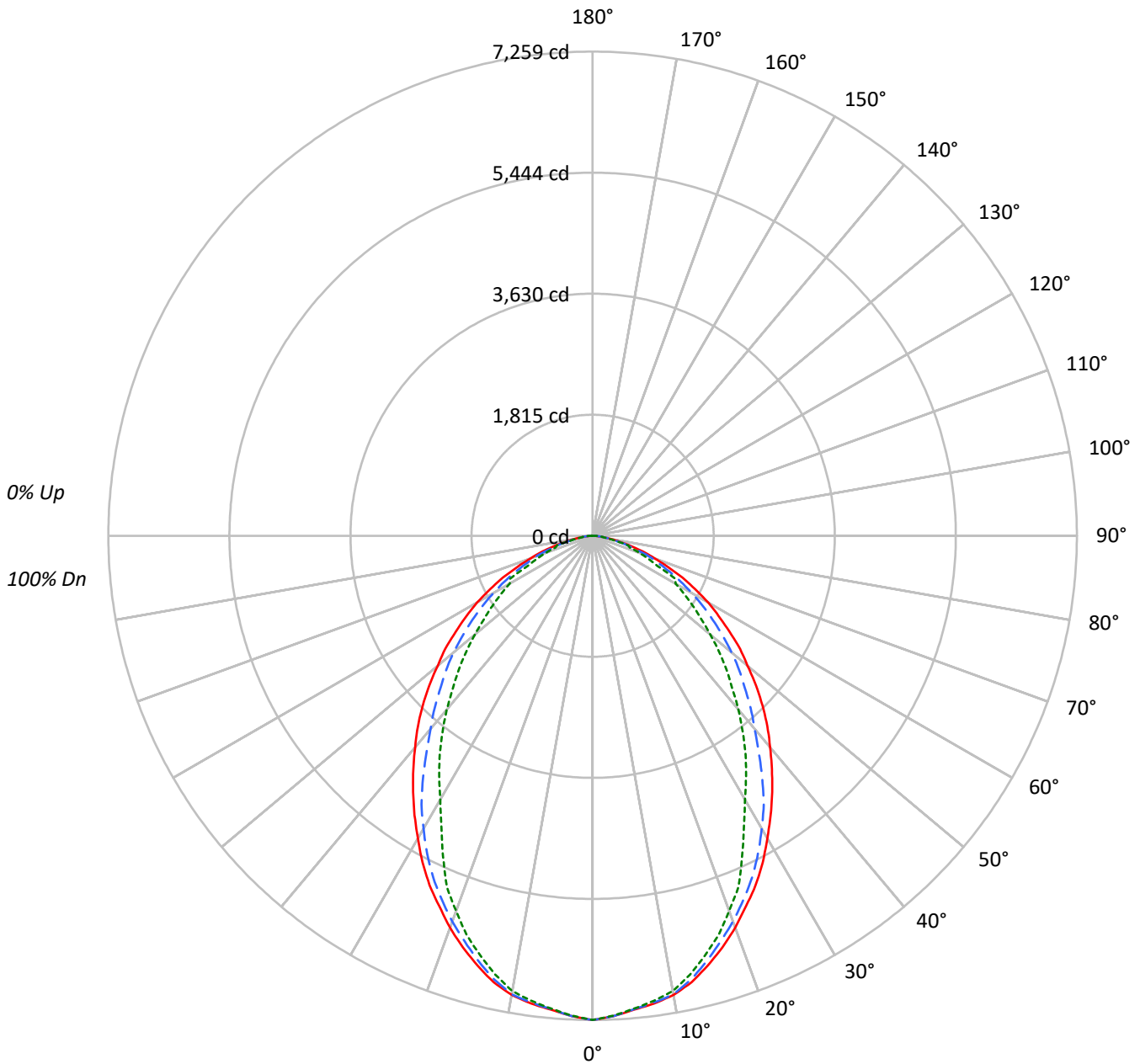
Lumens per Lamp: N/A
Luminaire Lumens: 14250.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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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CATALOG NUMBER: FMR-24-4-LD4-4STD-50-UNV-93-84-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°	9767	9767	9767
5°	9634	9623	9611
10°	9550	9539	9470
15°	9293	9199	9071
20°	8952	8807	8567
25°	8584	8397	7873
30°	8135	7875	7092
35°	7705	7278	6561
40°	7266	6633	5969
45°	6850	6132	5397
50°	6341	5691	4813
55°	5866	5157	4311
60°	5374	4607	3862
65°	4729	4034	3420
70°	3895	3532	2905
75°	3097	2705	2836
80°	2080	1950	1821
85°	1295	1555	1814



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	675.7	4.7
10°-20°	1854.4	13.0
20°-30°	2567.3	18.0
30°-40°	2737.4	19.2
40°-50°	2497.4	17.5
50°-60°	1956.5	13.7
60°-70°	1275.1	8.9
70°-80°	564.9	4.0
80°-90°	121.3	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°	5097.3	35.8
0°-40°	7834.8	55.0
0°-60°	12288.6	86.2
0°-90°	14250.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14250.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7259	7259	7259	7259	7259	
5°	7133	7124	7124	7116	7116	677
15°	6671	6671	6604	6537	6512	1875
25°	5782	5748	5656	5455	5304	2654
35°	4691	4657	4431	4095	3994	2933
45°	3600	3524	3222	2954	2836	2773
55°	2501	2425	2199	1938	1838	2243
65°	1485	1401	1267	1292	1074	1464
75°	596	554	520	495	546	639
85°	84	92	101	109	118	116
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7258.8	7258.8	7258.8	7258.8	7258.8
2.5°	7208.4	7208.4	7208.4	7200.0	7200.0
5°	7132.9	7124.5	7124.5	7116.1	7116.1
7.5°	7074.1	7065.8	7057.4	7049.0	7032.2
10°	6990.2	6990.2	6981.8	6939.9	6931.5
12.5°	6856.0	6847.6	6814.0	6755.3	6738.5
15°	6671.3	6671.3	6604.2	6537.1	6511.9
17.5°	6469.9	6461.6	6377.6	6310.5	6276.9
20°	6251.8	6235.0	6151.1	6042.0	5983.2
22.5°	6008.4	6008.4	5907.7	5765.0	5706.3
25°	5781.8	5748.3	5656.0	5454.6	5303.5
27.5°	5521.7	5471.3	5370.6	5085.3	4909.1
30°	5236.4	5211.2	5068.5	4699.3	4565.0
32.5°	4967.8	4925.9	4774.8	4388.8	4279.7
35°	4690.9	4657.4	4430.8	4095.1	3994.4
37.5°	4414.0	4372.0	4086.7	3818.2	3692.3
40°	4137.1	4086.7	3776.2	3532.9	3398.6
42.5°	3876.9	3809.8	3507.7	3247.6	3096.5
45°	3600.0	3524.5	3222.4	2953.9	2836.4
47.5°	3323.1	3256.0	2979.0	2702.1	2567.8
50°	3029.4	2970.6	2718.9	2442.0	2299.3
52.5°	2786.0	2693.7	2450.4	2173.4	2055.9
55°	2500.7	2425.2	2198.6	1938.5	1837.8
57.5°	2240.6	2165.0	1955.2	1711.9	1628.0
60°	1997.2	1888.1	1711.9	1502.1	1435.0
62.5°	1728.7	1644.8	1493.7	1317.5	1401.4
65°	1485.3	1401.4	1267.1	1292.3	1074.1
67.5°	1216.8	1174.8	1057.3	939.9	906.3
70°	990.2	939.9	897.9	772.0	738.5
72.5°	788.8	738.5	679.7	612.6	587.4
75°	595.8	553.8	520.3	495.1	545.5
77.5°	411.2	394.4	369.2	344.1	335.7
80°	268.5	260.1	251.7	243.4	235.0
82.5°	159.4	159.4	159.4	159.4	159.4
85°	83.9	92.3	100.7	109.1	117.5
87.5°	50.3	50.3	58.7	67.1	75.5
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)