

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: P547455

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-81-84-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: P547455
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-35-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

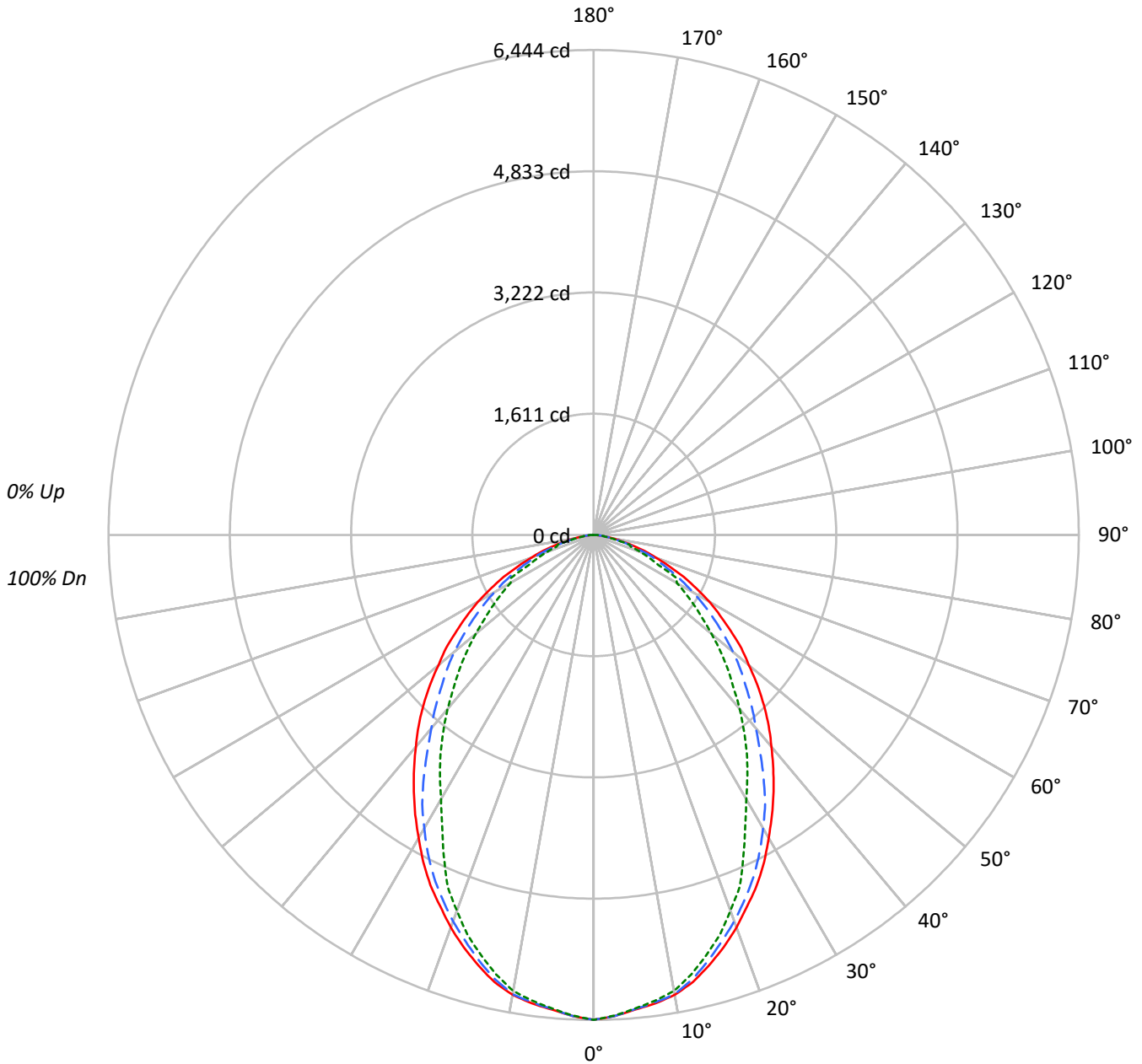
Lumens per Lamp: N/A
Luminaire Lumens: 12650.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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-35-UNV-81-84-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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				100				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8670	8670	8670
5°	8552	8542	8532
10°	8478	8468	8407
15°	8249	8166	8052
20°	7946	7818	7605
25°	7620	7454	6989
30°	7222	6990	6296
35°	6840	6461	5824
40°	6451	5888	5299
45°	6081	5443	4791
50°	5629	5052	4272
55°	5207	4578	3827
60°	4771	4089	3428
65°	4198	3581	3036
70°	3458	3136	2579
75°	2750	2401	2517
80°	1847	1732	1616
85°	1150	1380	1610



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	599.8	4.7
10°-20°	1646.2	13.0
20°-30°	2279.0	18.0
30°-40°	2430.1	19.2
40°-50°	2217.0	17.5
50°-60°	1736.8	13.7
60°-70°	1132.0	8.9
70°-80°	501.5	4.0
80°-90°	107.7	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°	4525.0	35.8
0°-40°	6955.1	55.0
0°-60°	10908.8	86.2
0°-90°	12650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6444	6444	6444	6444	6444	
5°	6332	6325	6325	6317	6317	601
15°	5922	5922	5863	5803	5781	1665
25°	5133	5103	5021	4842	4708	2356
35°	4164	4134	3933	3635	3546	2603
45°	3196	3129	2861	2622	2518	2462
55°	2220	2153	1952	1721	1631	1991
65°	1318	1244	1125	1147	954	1299
75°	529	492	462	440	484	567
85°	74	82	89	97	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6443.7	6443.7	6443.7	6443.7	6443.7
2.5°	6399.0	6399.0	6399.0	6391.6	6391.6
5°	6332.0	6324.6	6324.6	6317.1	6317.1
7.5°	6279.9	6272.4	6265.0	6257.5	6242.6
10°	6205.4	6205.4	6197.9	6160.7	6153.2
12.5°	6086.2	6078.7	6048.9	5996.8	5981.9
15°	5922.3	5922.3	5862.7	5803.1	5780.7
17.5°	5743.5	5736.0	5661.6	5602.0	5572.2
20°	5549.8	5534.9	5460.4	5363.6	5311.4
22.5°	5333.8	5333.8	5244.4	5117.7	5065.6
25°	5132.6	5102.8	5020.9	4842.1	4708.0
27.5°	4901.7	4857.0	4767.6	4514.3	4357.9
30°	4648.4	4626.1	4499.4	4171.7	4052.5
32.5°	4410.1	4372.8	4238.7	3896.0	3799.2
35°	4164.2	4134.4	3933.3	3635.3	3545.9
37.5°	3918.4	3881.1	3627.9	3389.5	3277.7
40°	3672.6	3627.9	3352.2	3136.2	3017.0
42.5°	3441.6	3382.0	3113.9	2882.9	2748.8
45°	3195.8	3128.8	2860.6	2622.2	2517.9
47.5°	2950.0	2890.4	2644.5	2398.7	2279.5
50°	2689.2	2637.1	2413.6	2167.8	2041.1
52.5°	2473.2	2391.3	2175.2	1929.4	1825.1
55°	2219.9	2152.9	1951.7	1720.8	1631.4
57.5°	1989.0	1921.9	1735.7	1519.7	1445.2
60°	1773.0	1676.1	1519.7	1333.4	1273.8
62.5°	1534.6	1460.1	1326.0	1169.6	1244.1
65°	1318.5	1244.1	1124.9	1147.2	953.5
67.5°	1080.2	1042.9	938.6	834.3	804.5
70°	879.0	834.3	797.1	685.3	655.5
72.5°	700.2	655.5	603.4	543.8	521.5
75°	528.9	491.7	461.9	439.5	484.2
77.5°	365.0	350.1	327.8	305.4	298.0
80°	238.4	230.9	223.5	216.0	208.6
82.5°	141.5	141.5	141.5	141.5	141.5
85°	74.5	81.9	89.4	96.8	104.3
87.5°	44.7	44.7	52.1	59.6	67.0
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)