

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: P546879

Luminaire Tested: **FMR-24-4-LD4-2STD-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: P546879
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-LD4-2STD-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

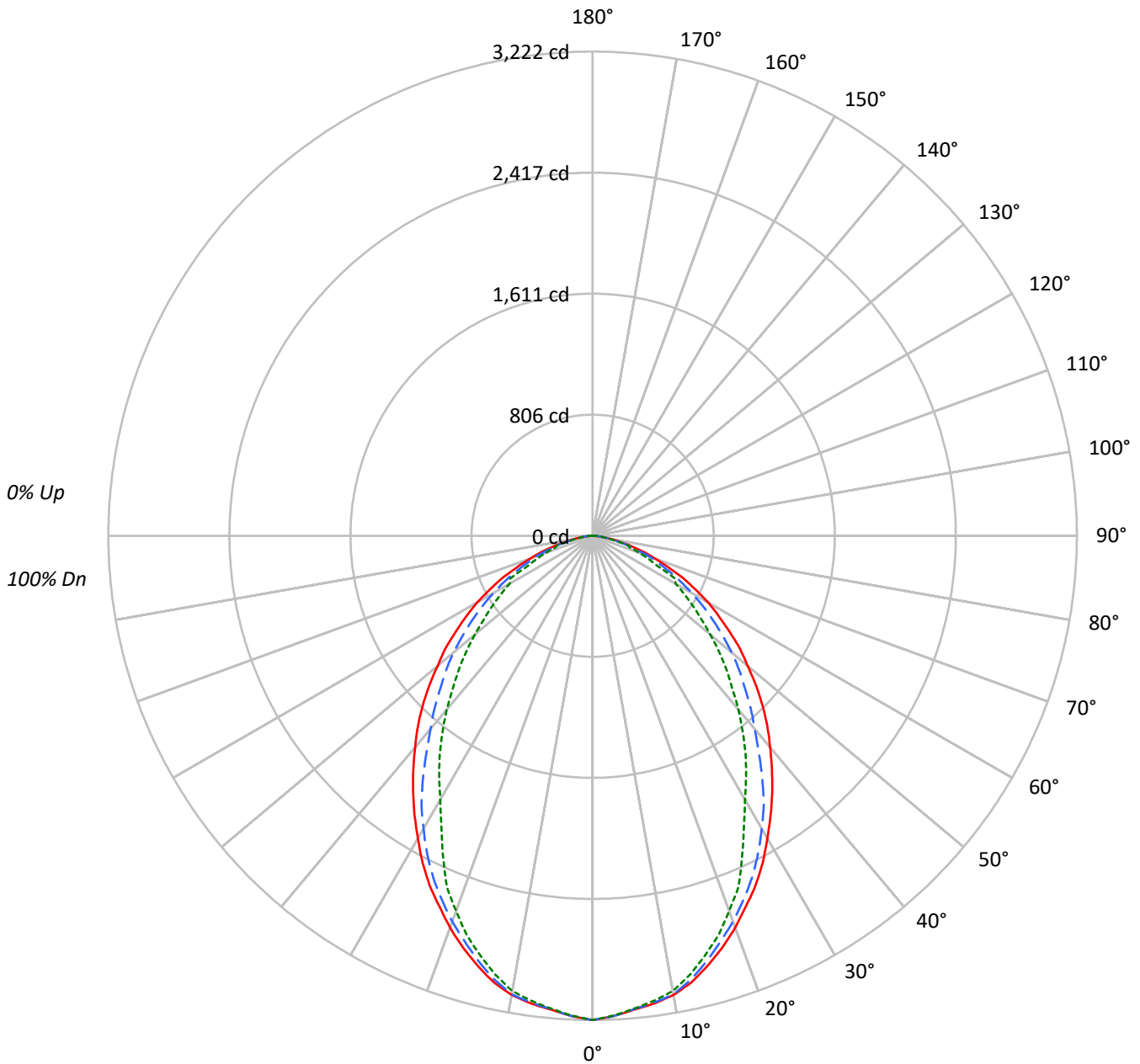
Lumens per Lamp: N/A
Luminaire Lumens: 6325.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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				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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4335	4335	4335
5°	4276	4271	4266
10°	4239	4234	4203
15°	4125	4083	4026
20°	3973	3909	3803
25°	3810	3727	3495
30°	3611	3495	3148
35°	3420	3230	2912
40°	3225	2944	2650
45°	3040	2722	2396
50°	2815	2526	2136
55°	2604	2289	1913
60°	2386	2045	1714
65°	2099	1791	1518
70°	1729	1568	1290
75°	1375	1200	1259
80°	924	865	808
85°	574	690	804



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.9	4.7
10°-20°	823.1	13.0
20°-30°	1139.5	18.0
30°-40°	1215.0	19.2
40°-50°	1108.5	17.5
50°-60°	868.4	13.7
60°-70°	566.0	8.9
70°-80°	250.8	4.0
80°-90°	53.8	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°	2262.5	35.8
0°-40°	3477.5	55.0
0°-60°	5454.4	86.2
0°-90°	6325.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6325.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3222	3222	3222	3222	3222	
5°	3166	3162	3162	3159	3159	301
15°	2961	2961	2931	2902	2890	832
25°	2566	2551	2510	2421	2354	1178
35°	2082	2067	1967	1818	1773	1302
45°	1598	1564	1430	1311	1259	1231
55°	1110	1076	976	860	816	996
65°	659	622	562	574	477	650
75°	264	246	231	220	242	283
85°	37	41	45	48	52	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3221.9	3221.9	3221.9	3221.9	3221.9
2.5°	3199.5	3199.5	3199.5	3195.8	3195.8
5°	3166.0	3162.3	3162.3	3158.6	3158.6
7.5°	3139.9	3136.2	3132.5	3128.8	3121.3
10°	3102.7	3102.7	3099.0	3080.3	3076.6
12.5°	3043.1	3039.4	3024.5	2998.4	2990.9
15°	2961.1	2961.1	2931.3	2901.5	2890.4
17.5°	2871.7	2868.0	2830.8	2801.0	2786.1
20°	2774.9	2767.5	2730.2	2681.8	2655.7
22.5°	2666.9	2666.9	2622.2	2558.9	2532.8
25°	2566.3	2551.4	2510.5	2421.1	2354.0
27.5°	2450.9	2428.5	2383.8	2257.2	2179.0
30°	2324.2	2313.0	2249.7	2085.8	2026.2
32.5°	2205.0	2186.4	2119.4	1948.0	1899.6
35°	2082.1	2067.2	1966.6	1817.7	1773.0
37.5°	1959.2	1940.6	1813.9	1694.7	1638.9
40°	1836.3	1813.9	1676.1	1568.1	1508.5
42.5°	1720.8	1691.0	1556.9	1441.5	1374.4
45°	1597.9	1564.4	1430.3	1311.1	1259.0
47.5°	1475.0	1445.2	1322.3	1199.4	1139.8
50°	1344.6	1318.5	1206.8	1083.9	1020.6
52.5°	1236.6	1195.6	1087.6	964.7	912.6
55°	1110.0	1076.4	975.9	860.4	815.7
57.5°	994.5	961.0	867.9	759.8	722.6
60°	886.5	838.1	759.8	666.7	636.9
62.5°	767.3	730.0	663.0	584.8	622.0
65°	659.3	622.0	562.4	573.6	476.8
67.5°	540.1	521.5	469.3	417.2	402.3
70°	439.5	417.2	398.5	342.7	327.8
72.5°	350.1	327.8	301.7	271.9	260.7
75°	264.5	245.8	230.9	219.8	242.1
77.5°	182.5	175.1	163.9	152.7	149.0
80°	119.2	115.5	111.7	108.0	104.3
82.5°	70.8	70.8	70.8	70.8	70.8
85°	37.2	41.0	44.7	48.4	52.1
87.5°	22.3	22.3	26.1	29.8	33.5
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)