

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: P547440

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-93-85-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: P547440
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-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

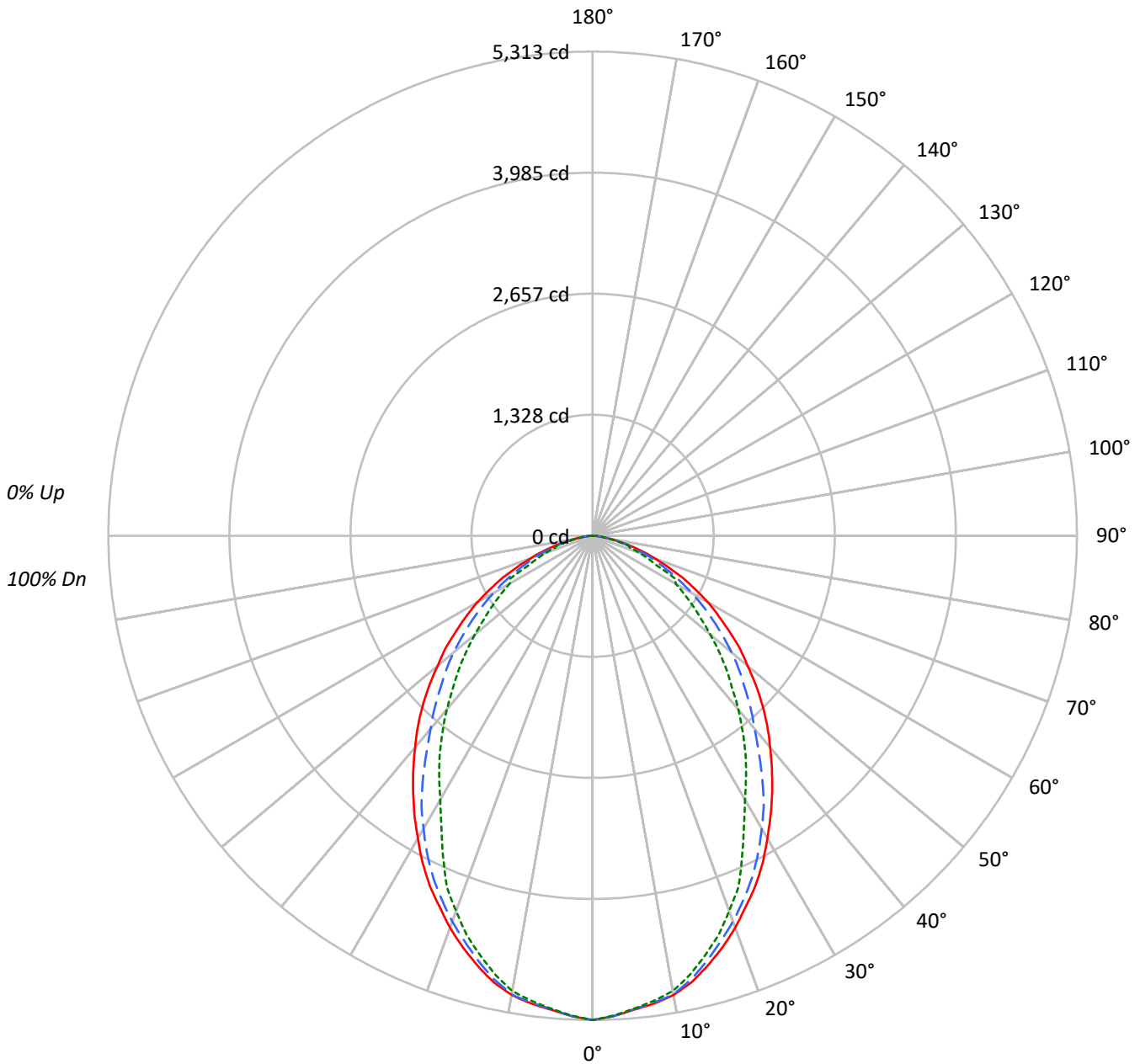
Lumens per Lamp: N/A
Luminaire Lumens: 10430.0 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	7148	7148	7148
5°	7051	7043	7035
10°	6990	6982	6932
15°	6802	6733	6639
20°	6552	6446	6270
25°	6283	6146	5763
30°	5955	5764	5191
35°	5639	5327	4802
40°	5318	4855	4369
45°	5014	4488	3950
50°	4641	4165	3523
55°	4293	3775	3155
60°	3934	3372	2826
65°	3461	2953	2503
70°	2851	2585	2126
75°	2267	1980	2075
80°	1523	1428	1333
85°	948	1138	1328



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	494.6	4.7
10°-20°	1357.3	13.0
20°-30°	1879.1	18.0
30°-40°	2003.6	19.2
40°-50°	1827.9	17.5
50°-60°	1432.0	13.7
60°-70°	933.3	8.9
70°-80°	413.5	4.0
80°-90°	88.8	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°	3730.9	35.8
0°-40°	5734.5	55.0
0°-60°	8994.4	86.2
0°-90°	10430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5313	5313	5313	5313	5313	
5°	5221	5215	5215	5208	5208	496
15°	4883	4883	4834	4785	4766	1373
25°	4232	4207	4140	3992	3882	1943
35°	3433	3409	3243	2997	2924	2147
45°	2635	2580	2359	2162	2076	2030
55°	1830	1775	1609	1419	1345	1642
65°	1087	1026	928	946	786	1071
75°	436	405	381	362	399	467
85°	61	68	74	80	86	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5312.9	5312.9	5312.9	5312.9	5312.9
2.5°	5276.1	5276.1	5276.1	5269.9	5269.9
5°	5220.8	5214.6	5214.6	5208.5	5208.5
7.5°	5177.8	5171.6	5165.5	5159.4	5147.1
10°	5116.4	5116.4	5110.2	5079.5	5073.4
12.5°	5018.1	5011.9	4987.4	4944.4	4932.1
15°	4883.0	4883.0	4833.8	4784.7	4766.3
17.5°	4735.5	4729.4	4668.0	4618.8	4594.3
20°	4575.9	4563.6	4502.1	4422.3	4379.3
22.5°	4397.7	4397.7	4324.0	4219.6	4176.6
25°	4231.9	4207.3	4139.8	3992.4	3881.8
27.5°	4041.5	4004.6	3930.9	3722.1	3593.1
30°	3832.7	3814.2	3709.8	3439.6	3341.3
32.5°	3636.1	3605.4	3494.8	3212.3	3132.5
35°	3433.4	3408.9	3243.0	2997.3	2923.6
37.5°	3230.7	3200.0	2991.2	2794.6	2702.5
40°	3028.0	2991.2	2763.9	2585.8	2487.5
42.5°	2837.6	2788.5	2567.4	2377.0	2266.4
45°	2635.0	2579.7	2358.6	2162.0	2076.0
47.5°	2432.3	2383.1	2180.4	1977.8	1879.5
50°	2217.3	2174.3	1990.0	1787.3	1682.9
52.5°	2039.2	1971.6	1793.5	1590.8	1504.8
55°	1830.3	1775.1	1609.2	1418.8	1345.1
57.5°	1639.9	1584.7	1431.1	1253.0	1191.6
60°	1461.8	1382.0	1253.0	1099.4	1050.3
62.5°	1265.3	1203.8	1093.3	964.3	1025.7
65°	1087.1	1025.7	927.5	945.9	786.2
67.5°	890.6	859.9	773.9	687.9	663.3
70°	724.8	687.9	657.2	565.1	540.5
72.5°	577.4	540.5	497.5	448.4	429.9
75°	436.1	405.4	380.8	362.4	399.2
77.5°	301.0	288.7	270.3	251.8	245.7
80°	196.5	190.4	184.3	178.1	172.0
82.5°	116.7	116.7	116.7	116.7	116.7
85°	61.4	67.6	73.7	79.8	86.0
87.5°	36.9	36.9	43.0	49.1	55.3
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)