

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: P546996

Luminaire Tested: **FMR-24-4-LD4-3HI-35-UNV-93-94-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: P546996
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-LD4-3HI-35-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

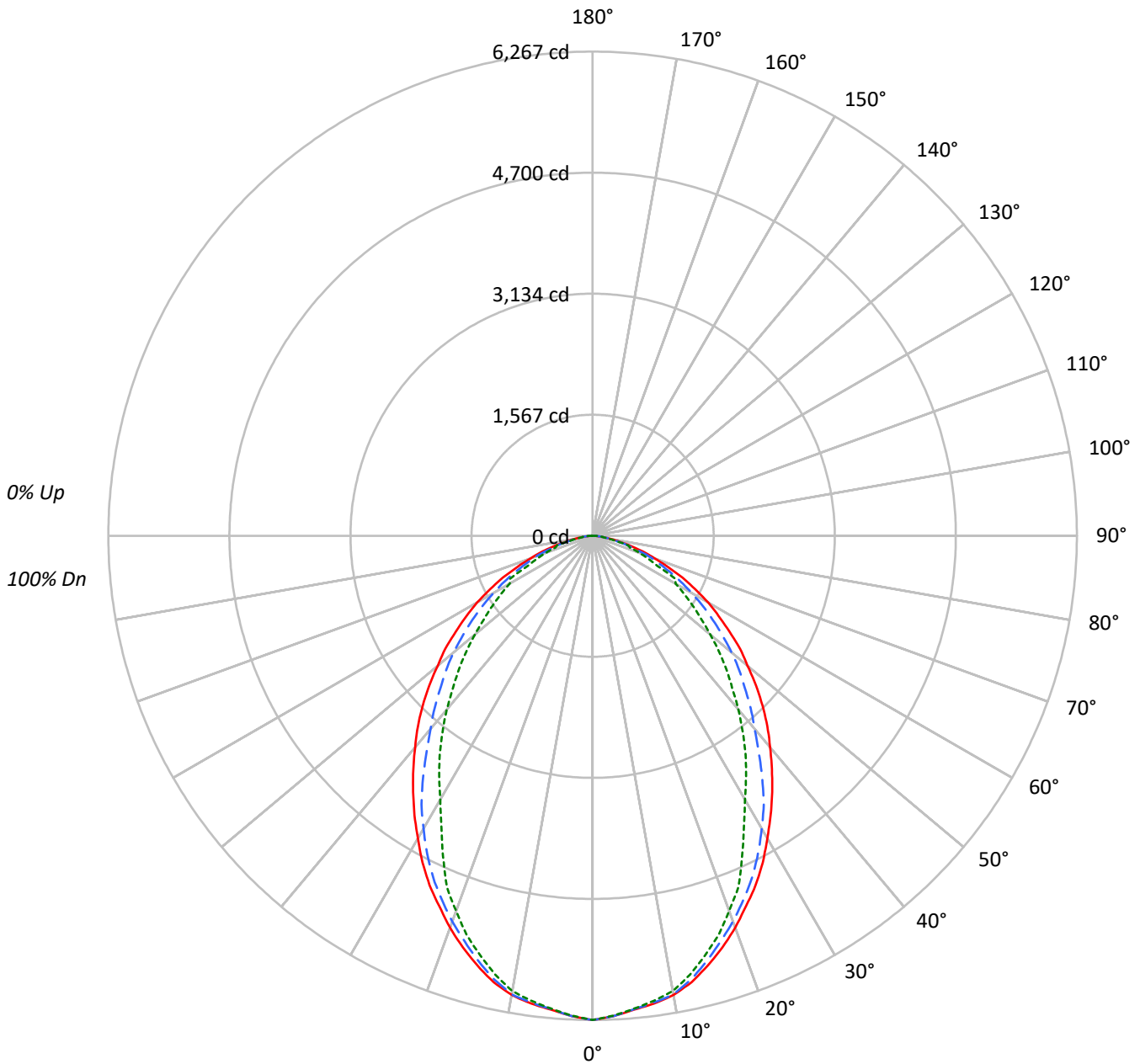
Lumens per Lamp: N/A
Luminaire Lumens: 12303.0 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	8432	8432	8432
5°	8318	8308	8298
10°	8245	8236	8176
15°	8023	7942	7831
20°	7728	7604	7396
25°	7411	7250	6798
30°	7024	6799	6123
35°	6652	6283	5665
40°	6274	5726	5154
45°	5914	5294	4660
50°	5475	4914	4155
55°	5065	4453	3722
60°	4640	3977	3334
65°	4083	3483	2953
70°	3363	3050	2508
75°	2674	2335	2448
80°	1796	1684	1572
85°	1119	1342	1565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	583.4	4.7
10°-20°	1601.0	13.0
20°-30°	2216.5	18.0
30°-40°	2363.4	19.2
40°-50°	2156.1	17.5
50°-60°	1689.2	13.7
60°-70°	1100.9	8.9
70°-80°	487.8	4.0
80°-90°	104.7	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°	4400.9	35.8
0°-40°	6764.3	55.0
0°-60°	10609.6	86.2
0°-90°	12303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12303.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6267	6267	6267	6267	6267	
5°	6158	6151	6151	6144	6144	585
15°	5760	5760	5702	5644	5622	1619
25°	4992	4963	4883	4709	4579	2292
35°	4050	4021	3825	3536	3449	2532
45°	3108	3043	2782	2550	2449	2394
55°	2159	2094	1898	1674	1587	1936
65°	1282	1210	1094	1116	927	1264
75°	514	478	449	428	471	551
85°	72	80	87	94	101	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6267.0	6267.0	6267.0	6267.0	6267.0
2.5°	6223.5	6223.5	6223.5	6216.3	6216.3
5°	6158.3	6151.1	6151.1	6143.8	6143.8
7.5°	6107.6	6100.3	6093.1	6085.9	6071.4
10°	6035.1	6035.1	6027.9	5991.7	5984.4
12.5°	5919.2	5912.0	5883.0	5832.3	5817.8
15°	5759.8	5759.8	5701.9	5643.9	5622.2
17.5°	5585.9	5578.7	5506.3	5448.3	5419.3
20°	5397.6	5383.1	5310.6	5216.4	5165.7
22.5°	5187.5	5187.5	5100.5	4977.4	4926.6
25°	4991.9	4962.9	4883.2	4709.3	4578.9
27.5°	4767.3	4723.8	4636.8	4390.5	4238.4
30°	4520.9	4499.2	4376.0	4057.2	3941.3
32.5°	4289.1	4252.9	4122.4	3789.2	3695.0
35°	4050.0	4021.0	3825.4	3535.6	3448.7
37.5°	3810.9	3774.7	3528.3	3296.5	3187.8
40°	3571.8	3528.3	3260.3	3050.2	2934.3
42.5°	3347.2	3289.3	3028.4	2803.8	2673.4
45°	3108.1	3042.9	2782.1	2550.3	2448.8
47.5°	2869.0	2811.1	2572.0	2332.9	2217.0
50°	2615.5	2564.8	2347.4	2108.3	1985.1
52.5°	2405.4	2325.7	2115.6	1876.5	1775.0
55°	2159.0	2093.8	1898.2	1673.6	1586.7
57.5°	1934.4	1869.2	1688.1	1478.0	1405.5
60°	1724.3	1630.1	1478.0	1296.9	1238.9
62.5°	1492.5	1420.0	1289.6	1137.5	1209.9
65°	1282.4	1209.9	1094.0	1115.7	927.4
67.5°	1050.5	1014.3	912.9	811.4	782.5
70°	854.9	811.4	775.2	666.5	637.6
72.5°	681.0	637.6	586.9	528.9	507.2
75°	514.4	478.2	449.2	427.5	470.9
77.5°	355.0	340.5	318.8	297.0	289.8
80°	231.8	224.6	217.4	210.1	202.9
82.5°	137.7	137.7	137.7	137.7	137.7
85°	72.5	79.7	86.9	94.2	101.4
87.5°	43.5	43.5	50.7	58.0	65.2
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)