

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: P546981

Luminaire Tested: **FMR-24-4-LD4-3HI-35-UNV-81-96-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: P546981
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-81-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

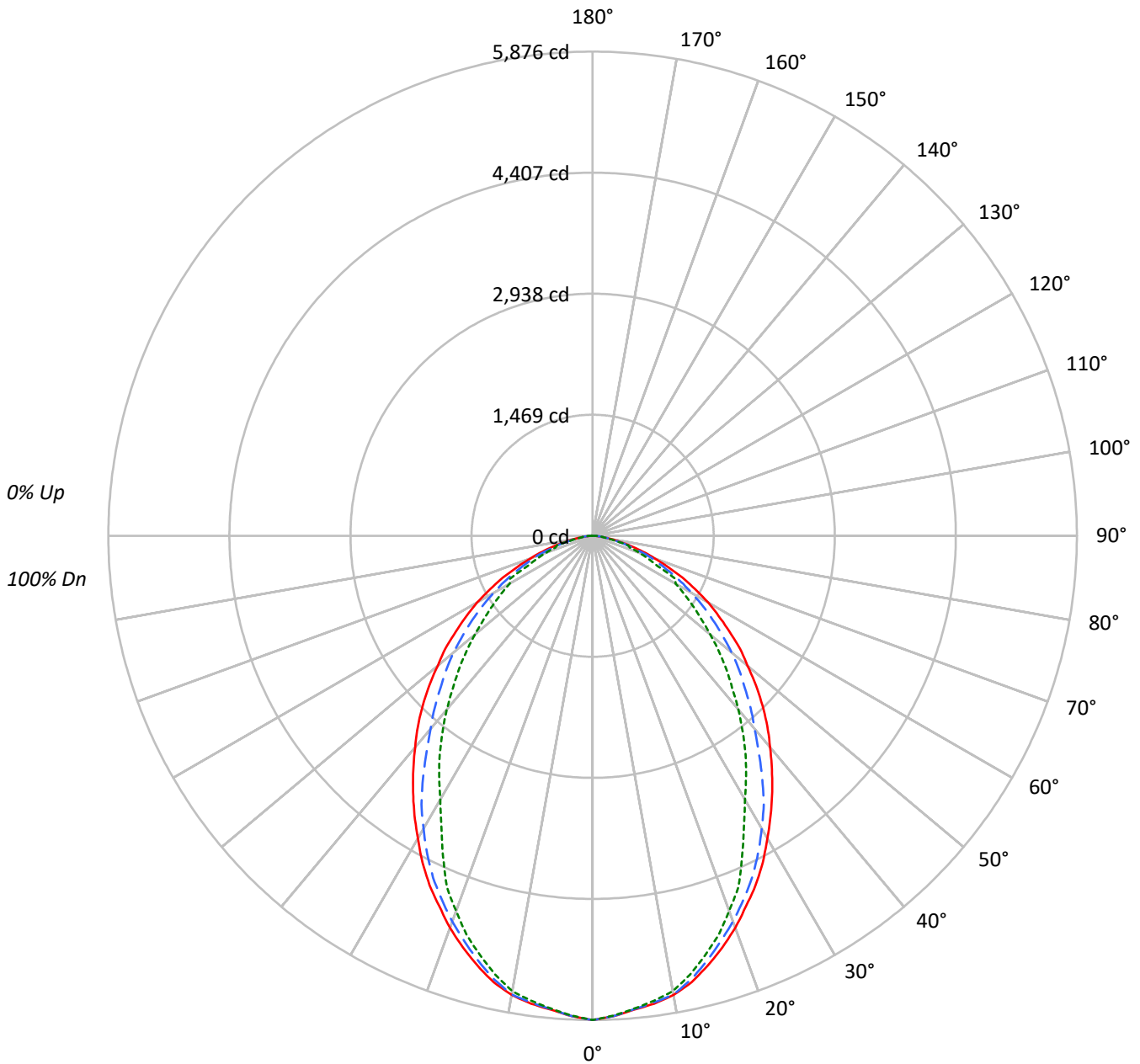
Lumens per Lamp: N/A
Luminaire Lumens: 11536.0 lumens
Efficiency: N/A
Efficacy: 89.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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								
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°	7906	7906	7906
5°	7799	7790	7781
10°	7731	7722	7666
15°	7523	7447	7343
20°	7247	7130	6935
25°	6949	6797	6374
30°	6586	6375	5742
35°	6238	5892	5311
40°	5882	5369	4832
45°	5546	4964	4369
50°	5133	4607	3896
55°	4749	4175	3490
60°	4351	3729	3126
65°	3828	3266	2769
70°	3153	2860	2352
75°	2507	2190	2296
80°	1684	1579	1474
85°	1048	1258	1468



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	547.0	4.7
10°-20°	1501.2	13.0
20°-30°	2078.3	18.0
30°-40°	2216.1	19.2
40°-50°	2021.7	17.5
50°-60°	1583.9	13.7
60°-70°	1032.3	8.9
70°-80°	457.3	4.0
80°-90°	98.2	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°	4126.5	35.8
0°-40°	6342.6	55.0
0°-60°	9948.2	86.2
0°-90°	11536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11536.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5876	5876	5876	5876	5876	
5°	5774	5768	5768	5761	5761	548
15°	5401	5401	5346	5292	5272	1518
25°	4681	4654	4579	4416	4293	2149
35°	3798	3770	3587	3315	3234	2374
45°	2914	2853	2609	2391	2296	2245
55°	2024	1963	1780	1569	1488	1816
65°	1202	1134	1026	1046	870	1185
75°	482	448	421	401	442	517
85°	68	75	82	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5876.3	5876.3	5876.3	5876.3	5876.3
2.5°	5835.5	5835.5	5835.5	5828.7	5828.7
5°	5774.4	5767.6	5767.6	5760.8	5760.8
7.5°	5726.8	5720.0	5713.2	5706.4	5692.9
10°	5658.9	5658.9	5652.1	5618.1	5611.3
12.5°	5550.2	5543.4	5516.2	5468.7	5455.1
15°	5400.7	5400.7	5346.4	5292.1	5271.7
17.5°	5237.7	5230.9	5163.0	5108.6	5081.5
20°	5061.1	5047.5	4979.6	4891.2	4843.7
22.5°	4864.1	4864.1	4782.5	4667.1	4619.5
25°	4680.6	4653.5	4578.7	4415.7	4293.4
27.5°	4470.1	4429.3	4347.8	4116.8	3974.1
30°	4239.1	4218.7	4103.2	3804.3	3695.6
32.5°	4021.7	3987.7	3865.4	3552.9	3464.6
35°	3797.5	3770.3	3586.9	3315.2	3233.7
37.5°	3573.3	3539.4	3308.4	3091.0	2989.1
40°	3349.1	3308.4	3057.0	2860.0	2751.3
42.5°	3138.5	3084.2	2839.6	2629.0	2506.8
45°	2914.4	2853.2	2608.7	2391.3	2296.2
47.5°	2690.2	2635.8	2411.7	2187.5	2078.8
50°	2452.4	2404.9	2201.1	1976.9	1861.4
52.5°	2255.4	2180.7	1983.7	1759.5	1664.4
55°	2024.4	1963.3	1779.9	1569.3	1487.8
57.5°	1813.8	1752.7	1582.9	1385.9	1317.9
60°	1616.8	1528.5	1385.9	1216.0	1161.7
62.5°	1399.4	1331.5	1209.2	1066.6	1134.5
65°	1202.4	1134.5	1025.8	1046.2	869.6
67.5°	985.0	951.1	856.0	760.9	733.7
70°	801.6	760.9	726.9	625.0	597.8
72.5°	638.6	597.8	550.3	495.9	475.5
75°	482.3	448.4	421.2	400.8	441.6
77.5°	332.9	319.3	298.9	278.5	271.7
80°	217.4	210.6	203.8	197.0	190.2
82.5°	129.1	129.1	129.1	129.1	129.1
85°	67.9	74.7	81.5	88.3	95.1
87.5°	40.8	40.8	47.6	54.3	61.1
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)