

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: P546295

Luminaire Tested: **FMR-12-4-LD4-2STD-35-UNV-80-84-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: P546295
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-12-4-LD4-2STD-35-UNV-80-84-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

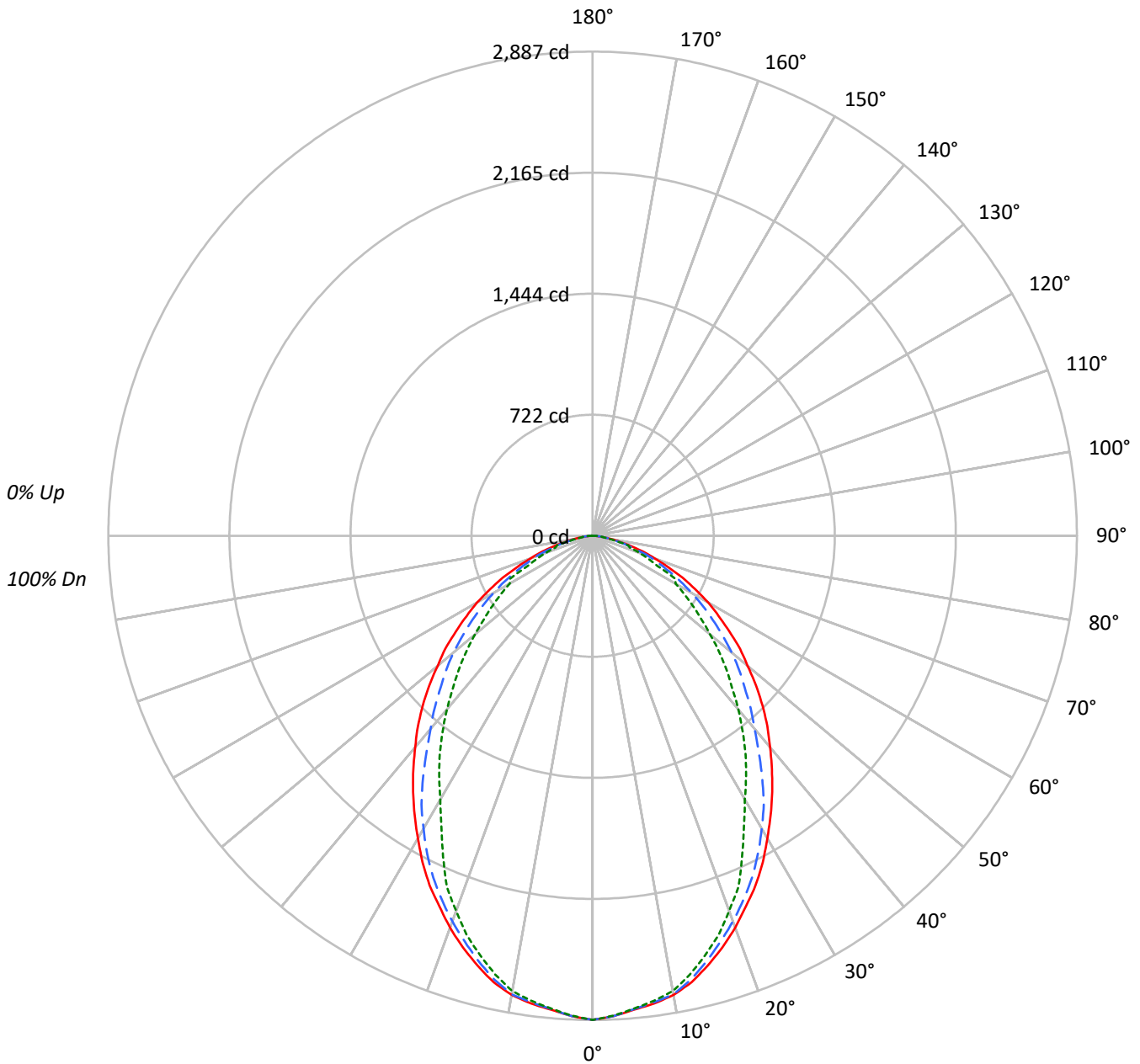
Lumens per Lamp: N/A
Luminaire Lumens: 5667.0 lumens
Efficiency: N/A
Efficacy: 85.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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									
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			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°	7768	7768	7768
5°	7662	7653	7645
10°	7596	7587	7532
15°	7391	7317	7215
20°	7120	7005	6814
25°	6827	6679	6262
30°	6471	6263	5641
35°	6128	5789	5218
40°	5779	5275	4748
45°	5449	4877	4293
50°	5043	4527	3828
55°	4666	4102	3429
60°	4275	3664	3071
65°	3761	3209	2720
70°	3098	2810	2311
75°	2463	2151	2255
80°	1655	1551	1447
85°	1031	1235	1442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.7	4.7
10°-20°	737.5	13.0
20°-30°	1021.0	18.0
30°-40°	1088.6	19.2
40°-50°	993.2	17.5
50°-60°	778.1	13.7
60°-70°	507.1	8.9
70°-80°	224.7	4.0
80°-90°	48.2	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°	2027.1	35.8
0°-40°	3115.8	55.0
0°-60°	4887.0	86.2
0°-90°	5667.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5667.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2887	2887	2887	2887	2887	
5°	2837	2833	2833	2830	2830	269
15°	2653	2653	2626	2600	2590	746
25°	2299	2286	2249	2169	2109	1056
35°	1866	1852	1762	1629	1588	1166
45°	1432	1402	1282	1175	1128	1103
55°	994	964	874	771	731	892
65°	591	557	504	514	427	582
75°	237	220	207	197	217	254
85°	33	37	40	43	47	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2886.7	2886.7	2886.7	2886.7	2886.7
2.5°	2866.7	2866.7	2866.7	2863.3	2863.3
5°	2836.6	2833.3	2833.3	2830.0	2830.0
7.5°	2813.3	2809.9	2806.6	2803.3	2796.6
10°	2779.9	2779.9	2776.6	2759.9	2756.5
12.5°	2726.5	2723.2	2709.8	2686.5	2679.8
15°	2653.1	2653.1	2626.4	2599.7	2589.7
17.5°	2573.0	2569.7	2536.3	2509.6	2496.2
20°	2486.2	2479.6	2446.2	2402.8	2379.4
22.5°	2389.4	2389.4	2349.4	2292.7	2269.3
25°	2299.3	2286.0	2249.3	2169.2	2109.1
27.5°	2195.9	2175.9	2135.8	2022.4	1952.3
30°	2082.4	2072.4	2015.7	1868.8	1815.4
32.5°	1975.6	1958.9	1898.9	1745.4	1702.0
35°	1865.5	1852.2	1762.1	1628.6	1588.5
37.5°	1755.4	1738.7	1625.2	1518.4	1468.4
40°	1645.2	1625.2	1501.7	1405.0	1351.6
42.5°	1541.8	1515.1	1395.0	1291.5	1231.4
45°	1431.7	1401.6	1281.5	1174.7	1128.0
47.5°	1321.5	1294.8	1184.7	1074.6	1021.2
50°	1204.7	1181.4	1081.3	971.1	914.4
52.5°	1108.0	1071.2	974.5	864.3	817.6
55°	994.5	964.5	874.4	770.9	730.9
57.5°	891.0	861.0	777.6	680.8	647.4
60°	794.3	750.9	680.8	597.4	570.7
62.5°	687.5	654.1	594.0	523.9	557.3
65°	590.7	557.3	503.9	513.9	427.2
67.5°	483.9	467.2	420.5	373.8	360.4
70°	393.8	373.8	357.1	307.0	293.7
72.5°	313.7	293.7	270.3	243.6	233.6
75°	236.9	220.3	206.9	196.9	216.9
77.5°	163.5	156.8	146.8	136.8	133.5
80°	106.8	103.5	100.1	96.8	93.4
82.5°	63.4	63.4	63.4	63.4	63.4
85°	33.4	36.7	40.0	43.4	46.7
87.5°	20.0	20.0	23.4	26.7	30.0
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)