

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: P546360

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-80-85-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: P546360
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-50-UNV-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

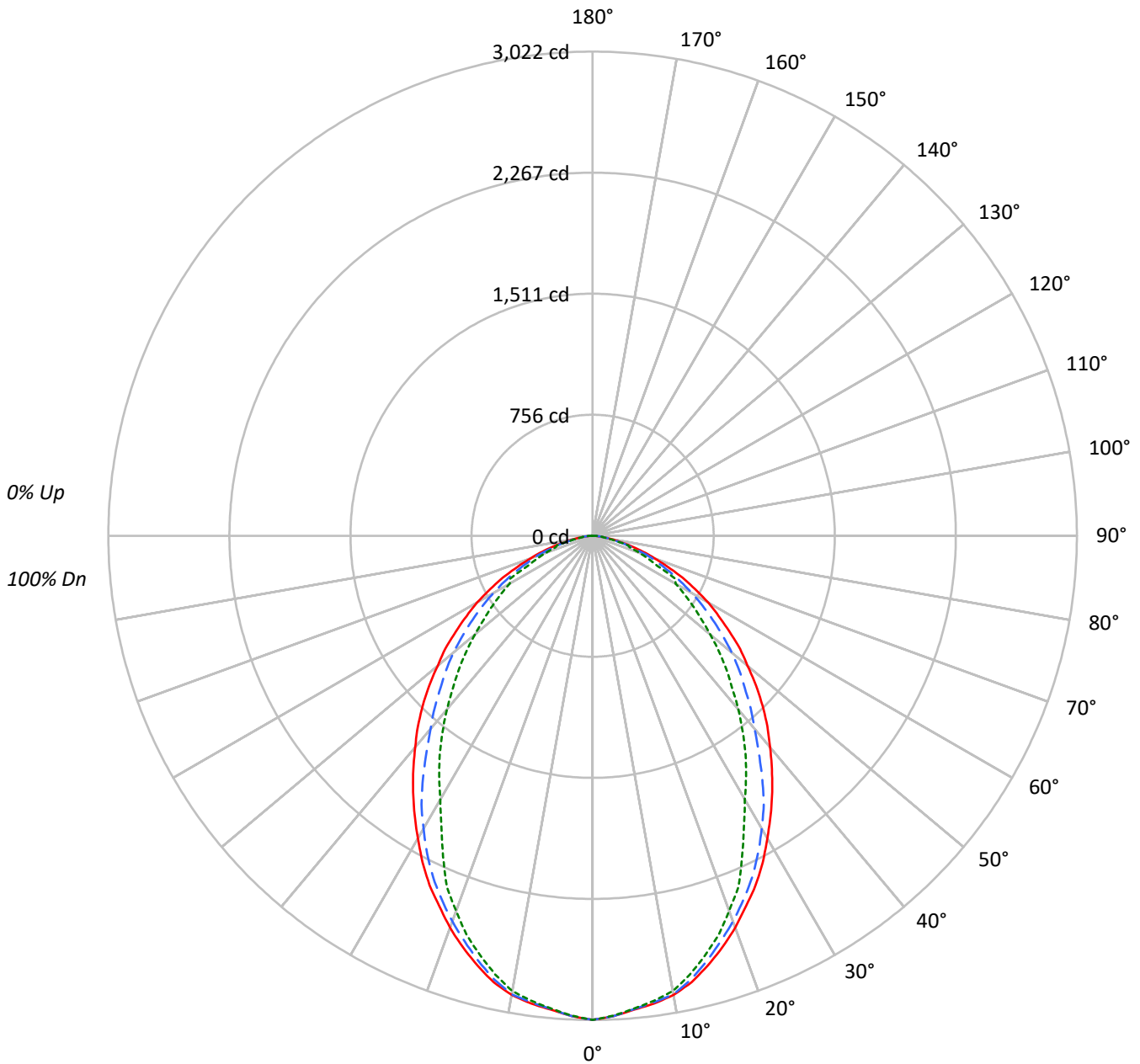
Lumens per Lamp: N/A
Luminaire Lumens: 5932.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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																			
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°	8131	8131	8131
5°	8021	8011	8002
10°	7951	7942	7884
15°	7737	7659	7552
20°	7453	7333	7133
25°	7146	6991	6555
30°	6773	6556	5905
35°	6415	6059	5462
40°	6050	5522	4970
45°	5703	5105	4493
50°	5279	4738	4007
55°	4884	4294	3589
60°	4475	3835	3215
65°	3937	3359	2847
70°	3243	2941	2419
75°	2578	2252	2361
80°	1733	1624	1516
85°	1078	1294	1510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.3	4.7
10°-20°	771.9	13.0
20°-30°	1068.7	18.0
30°-40°	1139.5	19.2
40°-50°	1039.6	17.5
50°-60°	814.4	13.7
60°-70°	530.8	8.9
70°-80°	235.2	4.0
80°-90°	50.5	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°	2121.9	35.8
0°-40°	3261.5	55.0
0°-60°	5115.5	86.2
0°-90°	5932.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5932.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3022	3022	3022	3022	3022	
5°	2969	2966	2966	2962	2962	282
15°	2777	2777	2749	2721	2711	781
25°	2407	2393	2354	2271	2208	1105
35°	1953	1939	1844	1705	1663	1221
45°	1499	1467	1341	1230	1181	1154
55°	1041	1010	915	807	765	934
65°	618	583	528	538	447	609
75°	248	231	217	206	227	266
85°	35	38	42	45	49	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3021.7	3021.7	3021.7	3021.7	3021.7
2.5°	3000.7	3000.7	3000.7	2997.2	2997.2
5°	2969.3	2965.8	2965.8	2962.3	2962.3
7.5°	2944.8	2941.3	2937.8	2934.3	2927.4
10°	2909.9	2909.9	2906.4	2888.9	2885.4
12.5°	2854.0	2850.5	2836.5	2812.1	2805.1
15°	2777.2	2777.2	2749.2	2721.3	2710.8
17.5°	2693.3	2689.8	2654.9	2626.9	2613.0
20°	2602.5	2595.5	2560.6	2515.2	2490.7
22.5°	2501.2	2501.2	2459.3	2399.9	2375.4
25°	2406.9	2392.9	2354.5	2270.6	2207.7
27.5°	2298.6	2277.6	2235.7	2116.9	2043.6
30°	2179.8	2169.3	2109.9	1956.2	1900.3
32.5°	2068.0	2050.6	1987.7	1827.0	1781.6
35°	1952.7	1938.8	1844.4	1704.7	1662.8
37.5°	1837.5	1820.0	1701.2	1589.4	1537.0
40°	1722.2	1701.2	1572.0	1470.7	1414.8
42.5°	1613.9	1585.9	1460.2	1351.9	1289.0
45°	1498.6	1467.2	1341.4	1229.6	1180.7
47.5°	1383.3	1355.4	1240.1	1124.8	1068.9
50°	1261.1	1236.6	1131.8	1016.5	957.2
52.5°	1159.8	1121.3	1020.0	904.8	855.9
55°	1041.0	1009.6	915.2	806.9	765.0
57.5°	932.7	901.3	813.9	712.6	677.7
60°	831.4	786.0	712.6	625.3	597.3
62.5°	719.6	684.7	621.8	548.4	583.4
65°	618.3	583.4	527.5	538.0	447.1
67.5°	506.5	489.1	440.2	391.2	377.3
70°	412.2	391.2	373.8	321.4	307.4
72.5°	328.4	307.4	283.0	255.0	244.5
75°	248.0	230.6	216.6	206.1	227.1
77.5°	171.2	164.2	153.7	143.2	139.7
80°	111.8	108.3	104.8	101.3	97.8
82.5°	66.4	66.4	66.4	66.4	66.4
85°	34.9	38.4	41.9	45.4	48.9
87.5°	21.0	21.0	24.5	27.9	31.4
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)