

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: P546381

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-82-96-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: P546381
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-82-96-EDD
Description: 1X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

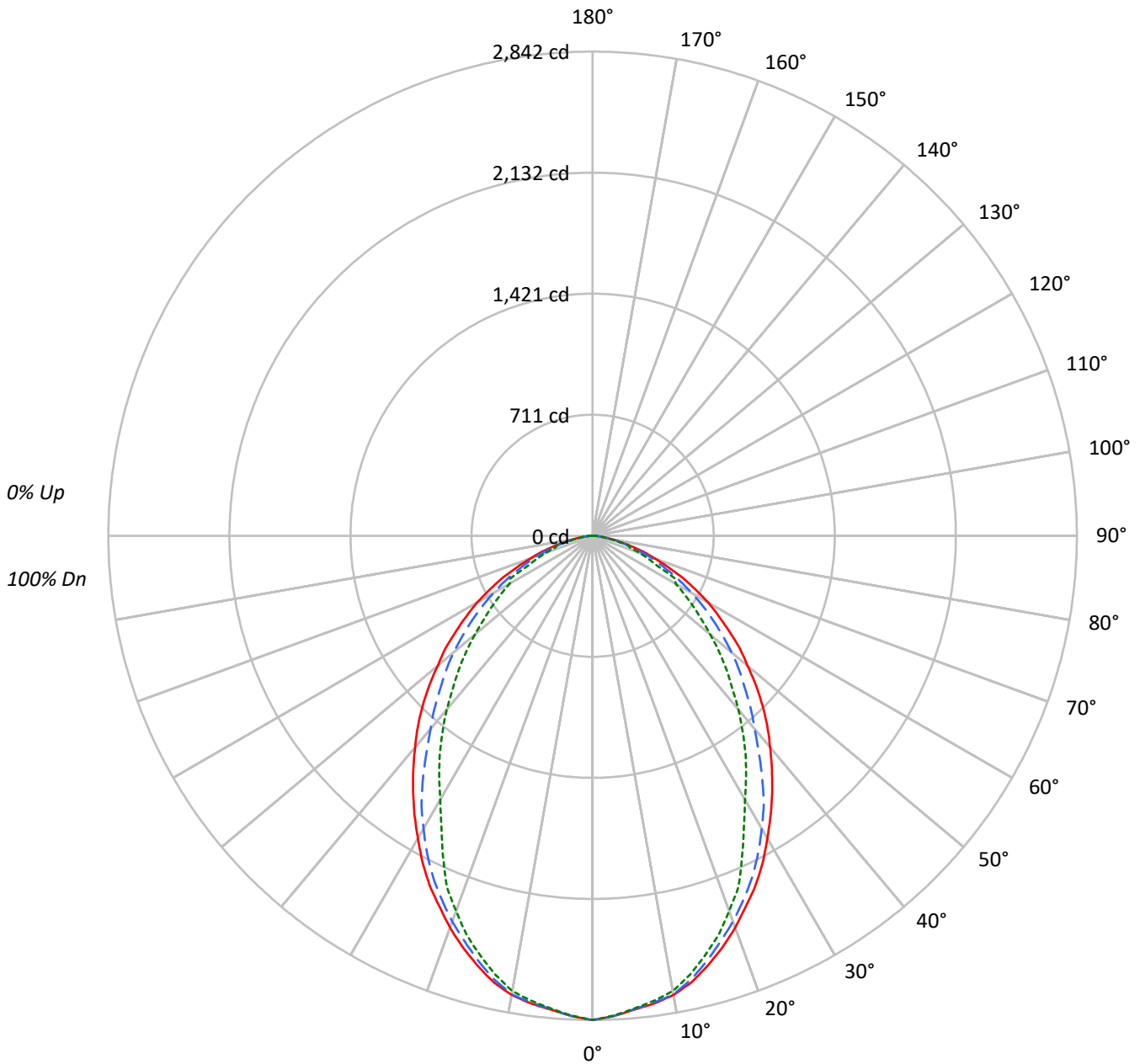
Lumens per Lamp: N/A
Luminaire Lumens: 5579.0 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7647	7647	7647
5°	7544	7535	7526
10°	7478	7469	7415
15°	7277	7203	7103
20°	7009	6896	6708
25°	6721	6575	6165
30°	6370	6166	5554
35°	6033	5699	5137
40°	5690	5193	4674
45°	5364	4801	4226
50°	4965	4456	3769
55°	4593	4039	3376
60°	4208	3607	3024
65°	3703	3159	2677
70°	3050	2766	2275
75°	2426	2118	2221
80°	1629	1528	1426
85°	1016	1216	1420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.5	4.7
10°-20°	726.0	13.0
20°-30°	1005.1	18.0
30°-40°	1071.7	19.2
40°-50°	977.7	17.5
50°-60°	766.0	13.7
60°-70°	499.2	8.9
70°-80°	221.2	4.0
80°-90°	47.5	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°	1995.7	35.8
0°-40°	3067.4	55.0
0°-60°	4811.1	86.2
0°-90°	5579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2842	2842	2842	2842	2842	
5°	2793	2789	2789	2786	2786	265
15°	2612	2612	2586	2559	2550	734
25°	2264	2250	2214	2136	2076	1039
35°	1836	1823	1735	1603	1564	1148
45°	1409	1380	1262	1156	1110	1086
55°	979	950	861	759	720	878
65°	582	549	496	506	420	573
75°	233	217	204	194	214	250
85°	33	36	39	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2841.9	2841.9	2841.9	2841.9	2841.9
2.5°	2822.2	2822.2	2822.2	2818.9	2818.9
5°	2792.6	2789.3	2789.3	2786.0	2786.0
7.5°	2769.6	2766.3	2763.0	2759.7	2753.2
10°	2736.7	2736.7	2733.4	2717.0	2713.7
12.5°	2684.2	2680.9	2667.7	2644.7	2638.2
15°	2611.9	2611.9	2585.6	2559.3	2549.5
17.5°	2533.0	2529.8	2496.9	2470.6	2457.5
20°	2447.6	2441.0	2408.2	2365.5	2342.5
22.5°	2352.3	2352.3	2312.9	2257.1	2234.1
25°	2263.6	2250.5	2214.4	2135.5	2076.4
27.5°	2161.8	2142.1	2102.7	1991.0	1922.0
30°	2050.1	2040.2	1984.4	1839.8	1787.3
32.5°	1945.0	1928.5	1869.4	1718.3	1675.6
35°	1836.5	1823.4	1734.7	1603.3	1563.8
37.5°	1728.1	1711.7	1600.0	1494.9	1445.6
40°	1619.7	1600.0	1478.4	1383.2	1330.6
42.5°	1517.9	1491.6	1373.3	1271.4	1212.3
45°	1409.4	1379.9	1261.6	1156.5	1110.5
47.5°	1301.0	1274.7	1166.3	1057.9	1005.3
50°	1186.0	1163.0	1064.5	956.1	900.2
52.5°	1090.8	1054.6	959.3	850.9	804.9
55°	979.0	949.5	860.8	758.9	719.5
57.5°	877.2	847.6	765.5	670.2	637.4
60°	781.9	739.2	670.2	588.1	561.8
62.5°	676.8	643.9	584.8	515.8	548.7
65°	581.5	548.7	496.1	506.0	420.5
67.5°	476.4	460.0	414.0	368.0	354.8
70°	387.7	368.0	351.5	302.3	289.1
72.5°	308.8	289.1	266.1	239.8	230.0
75°	233.3	216.8	203.7	193.8	213.6
77.5°	161.0	154.4	144.6	134.7	131.4
80°	105.1	101.8	98.6	95.3	92.0
82.5°	62.4	62.4	62.4	62.4	62.4
85°	32.9	36.1	39.4	42.7	46.0
87.5°	19.7	19.7	23.0	26.3	29.6
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)