

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: P546091

Luminaire Tested: **FMR-12-4-LD4-1STD-50-UNV-82-88-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: P546091
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-LD4-1STD-50-UNV-82-88-EDD
Description: 1X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

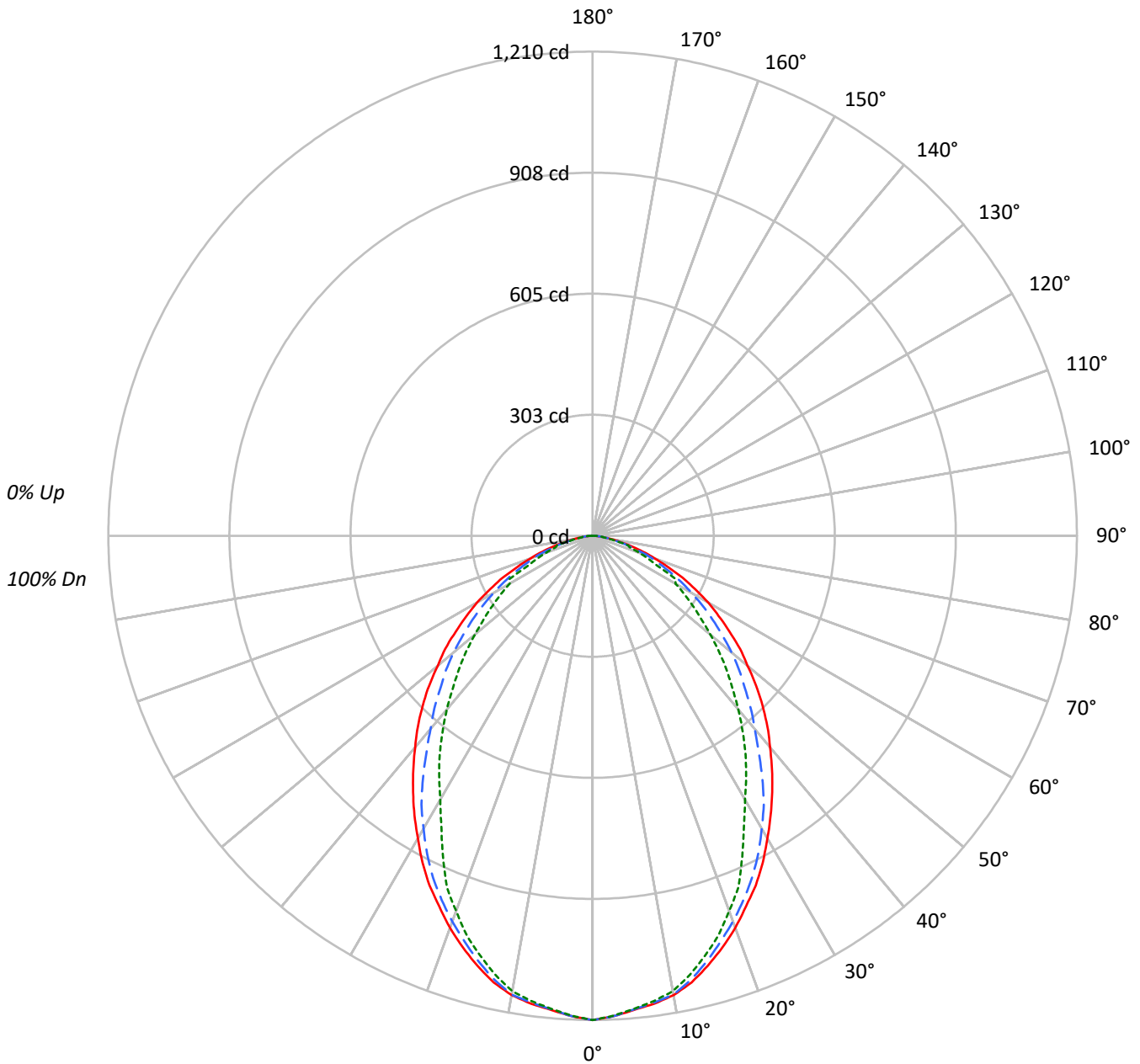
Lumens per Lamp: N/A
Luminaire Lumens: 2376.0 lumens
Efficiency: N/A
Efficacy: 71.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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				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				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°	3257	3257	3257
5°	3213	3209	3205
10°	3185	3181	3158
15°	3099	3068	3025
20°	2985	2937	2857
25°	2862	2800	2626
30°	2713	2626	2365
35°	2569	2427	2188
40°	2423	2212	1991
45°	2285	2045	1800
50°	2115	1898	1605
55°	1956	1720	1437
60°	1792	1536	1288
65°	1577	1345	1140
70°	1299	1178	969
75°	1032	902	945
80°	694	651	607
85°	432	519	605



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	4.7
10°-20°	309.2	13.0
20°-30°	428.1	18.0
30°-40°	456.4	19.2
40°-50°	416.4	17.5
50°-60°	326.2	13.7
60°-70°	212.6	8.9
70°-80°	94.2	4.0
80°-90°	20.2	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°	849.9	35.8
0°-40°	1306.3	55.0
0°-60°	2049.0	86.2
0°-90°	2376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1210	1210	1210	1210	1210	
5°	1189	1188	1188	1186	1186	113
15°	1112	1112	1101	1090	1086	313
25°	964	958	943	910	884	443
35°	782	777	739	683	666	489
45°	600	588	537	492	473	462
55°	417	404	367	323	306	374
65°	248	234	211	216	179	244
75°	99	92	87	83	91	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1210.3	1210.3	1210.3	1210.3	1210.3
2.5°	1201.9	1201.9	1201.9	1200.5	1200.5
5°	1189.3	1187.9	1187.9	1186.5	1186.5
7.5°	1179.5	1178.1	1176.7	1175.3	1172.5
10°	1165.5	1165.5	1164.1	1157.1	1155.7
12.5°	1143.1	1141.7	1136.1	1126.4	1123.6
15°	1112.4	1112.4	1101.2	1090.0	1085.8
17.5°	1078.8	1077.4	1063.4	1052.2	1046.6
20°	1042.4	1039.6	1025.6	1007.4	997.6
22.5°	1001.8	1001.8	985.0	961.2	951.5
25°	964.0	958.4	943.1	909.5	884.3
27.5°	920.7	912.3	895.5	847.9	818.5
30°	873.1	868.9	845.1	783.5	761.2
32.5°	828.3	821.3	796.1	731.8	713.6
35°	782.1	776.6	738.8	682.8	666.0
37.5°	736.0	729.0	681.4	636.6	615.6
40°	689.8	681.4	629.6	589.1	566.7
42.5°	646.4	635.2	584.9	541.5	516.3
45°	600.3	587.7	537.3	492.5	472.9
47.5°	554.1	542.9	496.7	450.5	428.2
50°	505.1	495.3	453.3	407.2	383.4
52.5°	464.5	449.1	408.6	362.4	342.8
55°	417.0	404.4	366.6	323.2	306.4
57.5°	373.6	361.0	326.0	285.4	271.4
60°	333.0	314.8	285.4	250.5	239.3
62.5°	288.2	274.2	249.1	219.7	233.7
65°	247.7	233.7	211.3	215.5	179.1
67.5°	202.9	195.9	176.3	156.7	151.1
70°	165.1	156.7	149.7	128.7	123.1
72.5°	131.5	123.1	113.3	102.1	97.9
75°	99.3	92.3	86.8	82.6	90.9
77.5°	68.6	65.8	61.6	57.4	56.0
80°	44.8	43.4	42.0	40.6	39.2
82.5°	26.6	26.6	26.6	26.6	26.6
85°	14.0	15.4	16.8	18.2	19.6
87.5°	8.4	8.4	9.8	11.2	12.6
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)