

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: P545812

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-93-94-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: P545812
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-12-2-LD4-2STD-50-UNV-93-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

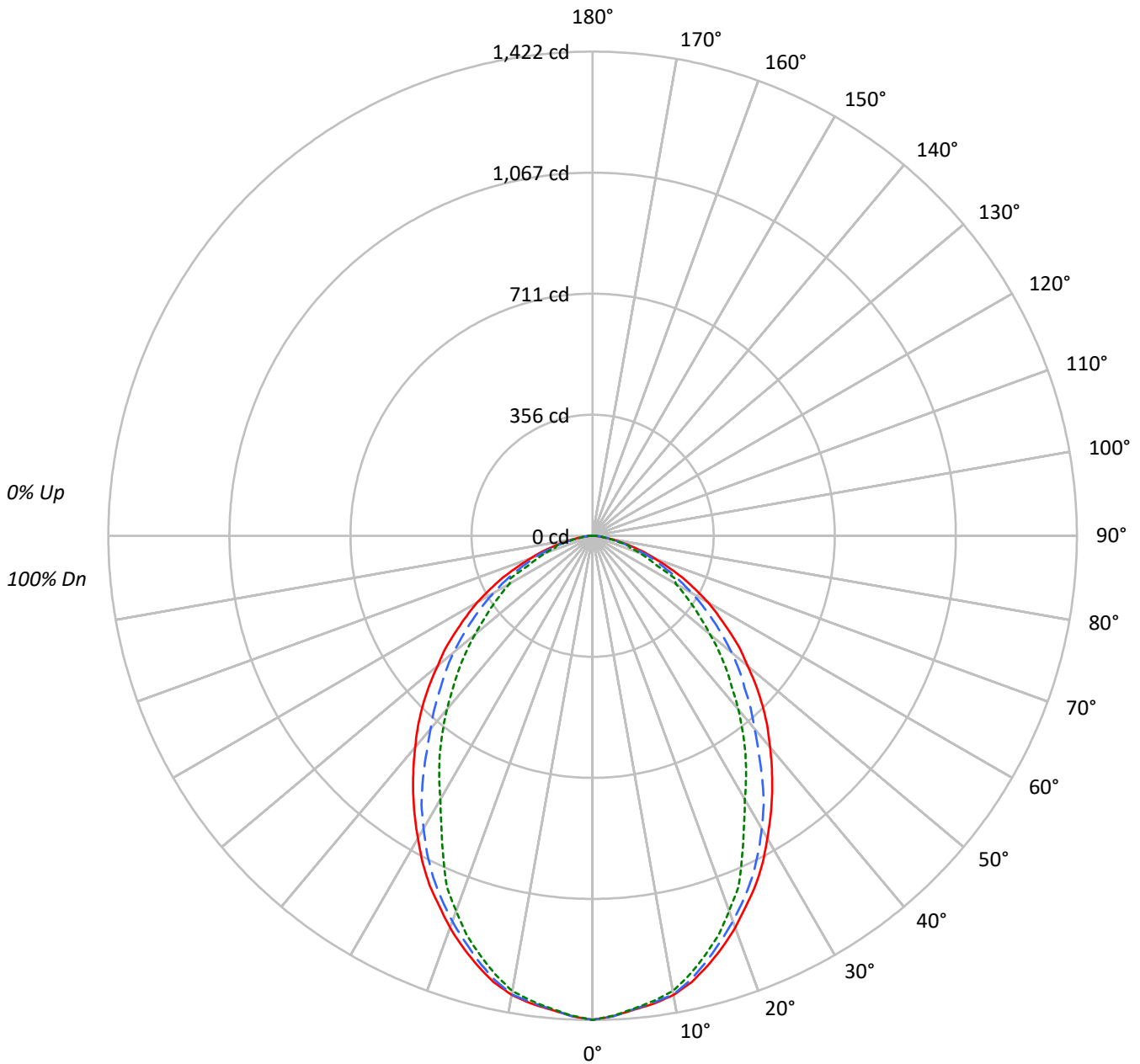
Lumens per Lamp: N/A
Luminaire Lumens: 2791.0 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	7652	7652	7652
5°	7547	7539	7530
10°	7482	7473	7419
15°	7280	7207	7106
20°	7013	6900	6712
25°	6725	6578	6168
30°	6374	6169	5556
35°	6037	5702	5140
40°	5693	5196	4677
45°	5367	4803	4228
50°	4968	4459	3770
55°	4596	4040	3377
60°	4211	3609	3026
65°	3705	3161	2679
70°	3051	2768	2275
75°	2427	2119	2221
80°	1630	1528	1426
85°	1013	1216	1420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.3	4.7
10°-20°	363.2	13.0
20°-30°	502.8	18.0
30°-40°	536.2	19.2
40°-50°	489.1	17.5
50°-60°	383.2	13.7
60°-70°	249.8	8.9
70°-80°	110.6	4.0
80°-90°	23.8	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°	998.4	35.8
0°-40°	1534.5	55.0
0°-60°	2406.8	86.2
0°-90°	2791.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1422	1422	1422	1422	1422	
5°	1397	1395	1395	1394	1394	133
15°	1307	1307	1294	1280	1275	367
25°	1132	1126	1108	1068	1039	520
35°	919	912	868	802	782	574
45°	705	690	631	578	556	543
55°	490	475	431	380	360	439
65°	291	274	248	253	210	287
75°	117	108	102	97	107	125
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1421.7	1421.7	1421.7	1421.7	1421.7
2.5°	1411.8	1411.8	1411.8	1410.2	1410.2
5°	1397.0	1395.4	1395.4	1393.8	1393.8
7.5°	1385.5	1383.9	1382.3	1380.6	1377.3
10°	1369.1	1369.1	1367.5	1359.2	1357.6
12.5°	1342.8	1341.2	1334.6	1323.1	1319.8
15°	1306.6	1306.6	1293.5	1280.4	1275.4
17.5°	1267.2	1265.6	1249.1	1236.0	1229.4
20°	1224.5	1221.2	1204.7	1183.4	1171.9
22.5°	1176.8	1176.8	1157.1	1129.1	1117.6
25°	1132.4	1125.9	1107.8	1068.3	1038.7
27.5°	1081.5	1071.6	1051.9	996.0	961.5
30°	1025.6	1020.7	992.7	920.4	894.1
32.5°	973.0	964.8	935.2	859.6	838.2
35°	918.8	912.2	867.8	802.1	782.3
37.5°	864.5	856.3	800.4	747.8	723.2
40°	810.3	800.4	739.6	691.9	665.7
42.5°	759.3	746.2	687.0	636.1	606.5
45°	705.1	690.3	631.1	578.5	555.5
47.5°	650.9	637.7	583.5	529.2	502.9
50°	593.3	581.8	532.5	478.3	450.3
52.5°	545.7	527.6	479.9	425.7	402.7
55°	489.8	475.0	430.6	379.7	359.9
57.5°	438.8	424.0	383.0	335.3	318.9
60°	391.2	369.8	335.3	294.2	281.1
62.5°	338.6	322.1	292.6	258.0	274.5
65°	290.9	274.5	248.2	253.1	210.4
67.5°	238.3	230.1	207.1	184.1	177.5
70°	193.9	184.1	175.9	151.2	144.6
72.5°	154.5	144.6	133.1	120.0	115.1
75°	116.7	108.5	101.9	97.0	106.8
77.5°	80.5	77.2	72.3	67.4	65.7
80°	52.6	51.0	49.3	47.7	46.0
82.5°	31.2	31.2	31.2	31.2	31.2
85°	16.4	18.1	19.7	21.4	23.0
87.5°	9.9	9.9	11.5	13.1	14.8
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)