

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: P545807

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-93-84-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: P545807
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-93-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

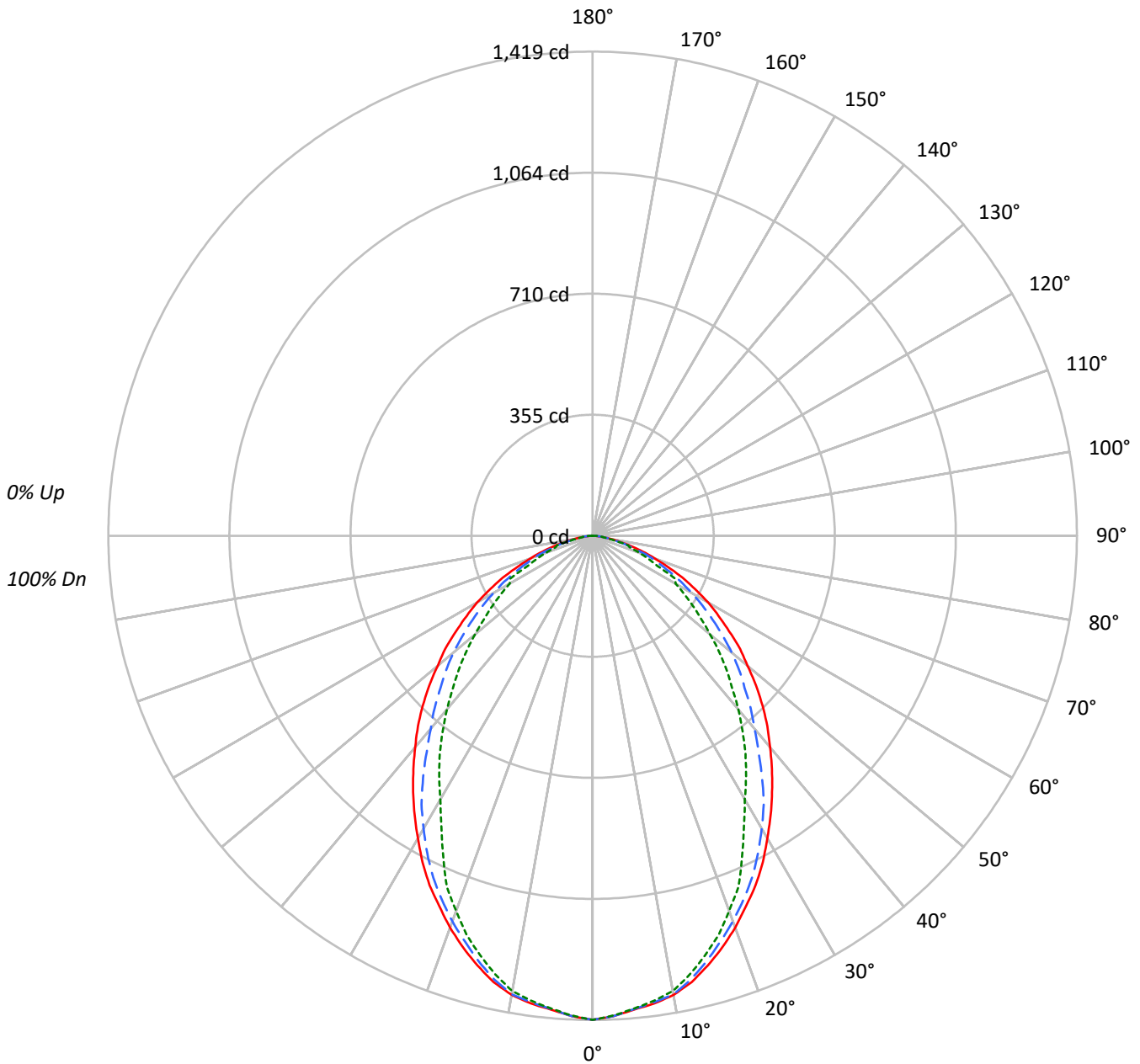
Lumens per Lamp: N/A
Luminaire Lumens: 2785.0 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (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°	7635	7635	7635
5°	7531	7522	7514
10°	7466	7457	7403
15°	7265	7192	7091
20°	6998	6885	6698
25°	6710	6564	6155
30°	6360	6156	5545
35°	6024	5689	5129
40°	5680	5185	4666
45°	5355	4794	4219
50°	4958	4449	3763
55°	4586	4032	3370
60°	4201	3602	3018
65°	3697	3153	2673
70°	3045	2762	2271
75°	2420	2115	2217
80°	1627	1525	1423
85°	1013	1216	1420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.1	4.7
10°-20°	362.4	13.0
20°-30°	501.7	18.0
30°-40°	535.0	19.2
40°-50°	488.1	17.5
50°-60°	382.4	13.7
60°-70°	249.2	8.9
70°-80°	110.4	4.0
80°-90°	23.7	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°	996.2	35.8
0°-40°	1531.2	55.0
0°-60°	2401.7	86.2
0°-90°	2785.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2785.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1394	1392	1392	1391	1391	132
15°	1304	1304	1291	1278	1273	367
25°	1130	1123	1105	1066	1036	519
35°	917	910	866	800	781	573
45°	704	689	630	577	554	542
55°	489	474	430	379	359	438
65°	290	274	248	253	210	286
75°	116	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°	1418.6	1418.6	1418.6	1418.6	1418.6
2.5°	1408.8	1408.8	1408.8	1407.2	1407.2
5°	1394.0	1392.4	1392.4	1390.8	1390.8
7.5°	1382.6	1380.9	1379.3	1377.6	1374.4
10°	1366.2	1366.2	1364.5	1356.3	1354.7
12.5°	1339.9	1338.3	1331.7	1320.2	1317.0
15°	1303.8	1303.8	1290.7	1277.6	1272.7
17.5°	1264.5	1262.8	1246.4	1233.3	1226.8
20°	1221.8	1218.6	1202.2	1180.8	1169.4
22.5°	1174.3	1174.3	1154.6	1126.7	1115.2
25°	1130.0	1123.4	1105.4	1066.0	1036.5
27.5°	1079.2	1069.3	1049.6	993.9	959.4
30°	1023.4	1018.5	990.6	918.4	892.2
32.5°	970.9	962.7	933.2	857.7	836.4
35°	916.8	910.2	865.9	800.3	780.7
37.5°	862.7	854.5	798.7	746.2	721.6
40°	808.5	798.7	738.0	690.5	664.2
42.5°	757.7	744.6	685.5	634.7	605.2
45°	703.6	688.8	629.8	577.3	554.3
47.5°	649.5	636.3	582.2	528.1	501.9
50°	592.1	580.6	531.4	477.3	449.4
52.5°	544.5	526.5	478.9	424.8	401.8
55°	488.7	474.0	429.7	378.9	359.2
57.5°	437.9	423.1	382.1	334.6	318.2
60°	390.3	369.0	334.6	293.6	280.4
62.5°	337.8	321.4	291.9	257.5	273.9
65°	290.3	273.9	247.6	252.6	209.9
67.5°	237.8	229.6	206.6	183.7	177.1
70°	193.5	183.7	175.5	150.9	144.3
72.5°	154.2	144.3	132.8	119.7	114.8
75°	116.4	108.2	101.7	96.8	106.6
77.5°	80.4	77.1	72.2	67.2	65.6
80°	52.5	50.8	49.2	47.6	45.9
82.5°	31.2	31.2	31.2	31.2	31.2
85°	16.4	18.0	19.7	21.3	23.0
87.5°	9.8	9.8	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)