

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: P545811

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-93-88-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: P545811
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-93-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

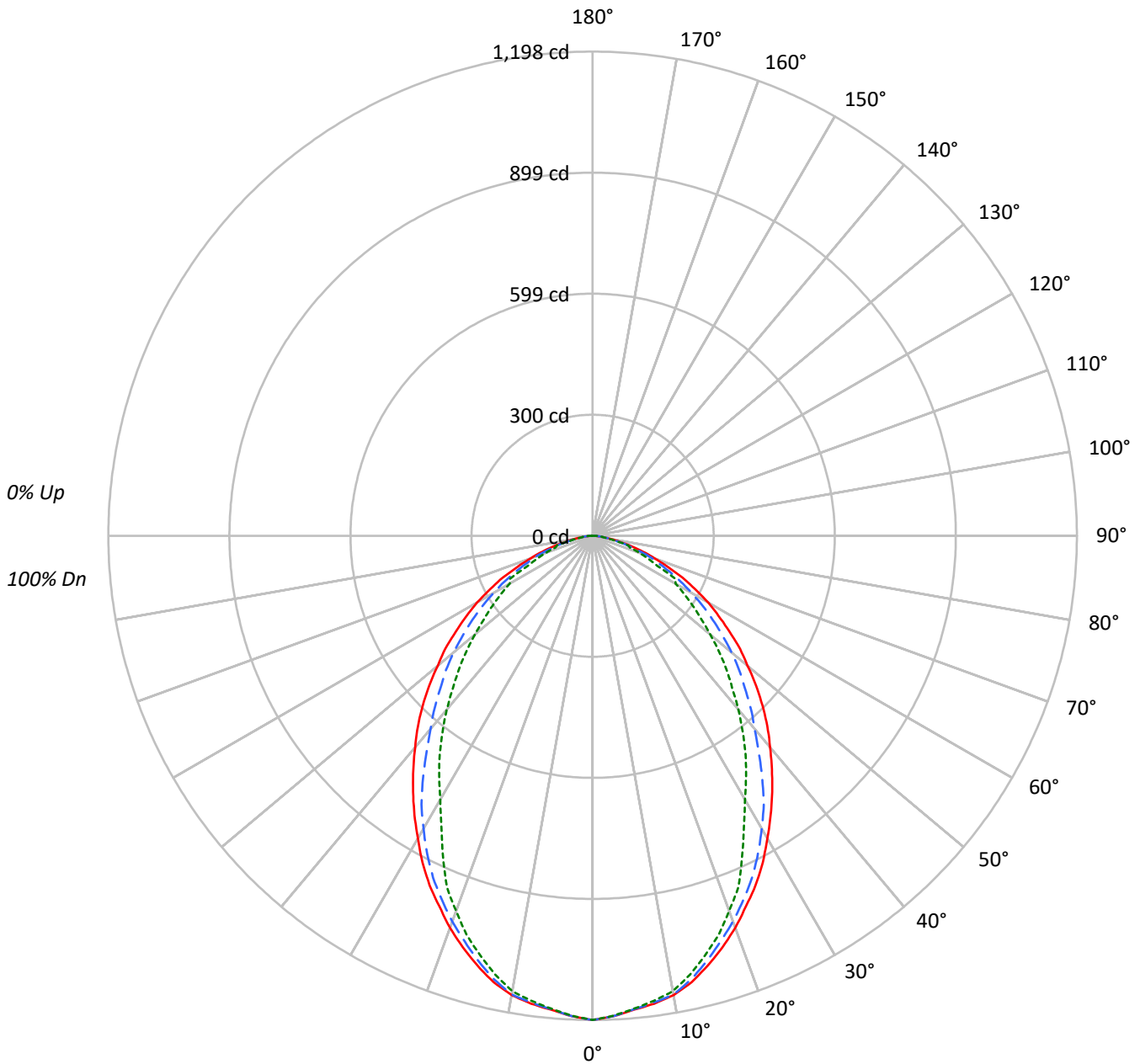
Lumens per Lamp: N/A
Luminaire Lumens: 2352.0 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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			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°	6448	6448	6448
5°	6360	6353	6345
10°	6305	6298	6252
15°	6135	6073	5989
20°	5910	5814	5656
25°	5667	5543	5198
30°	5371	5199	4683
35°	5087	4805	4332
40°	4797	4379	3941
45°	4523	4048	3564
50°	4186	3758	3177
55°	3872	3405	2846
60°	3548	3042	2549
65°	3123	2663	2258
70°	2571	2332	1918
75°	2044	1786	1871
80°	1373	1289	1203
85°	858	1025	1198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	4.7
10°-20°	306.1	13.0
20°-30°	423.7	18.0
30°-40°	451.8	19.2
40°-50°	412.2	17.5
50°-60°	322.9	13.7
60°-70°	210.5	8.9
70°-80°	93.2	4.0
80°-90°	20.0	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°	841.3	35.8
0°-40°	1293.1	55.0
0°-60°	2028.3	86.2
0°-90°	2352.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2352.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1198	1198	1198	1198	1198	
5°	1177	1176	1176	1174	1174	112
15°	1101	1101	1090	1079	1075	310
25°	954	949	934	900	875	438
35°	774	769	731	676	659	484
45°	594	582	532	488	468	458
55°	413	400	363	320	303	370
65°	245	231	209	213	177	242
75°	98	91	86	82	90	105
85°	14	15	17	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1198.1	1198.1	1198.1	1198.1	1198.1
2.5°	1189.8	1189.8	1189.8	1188.4	1188.4
5°	1177.3	1175.9	1175.9	1174.5	1174.5
7.5°	1167.6	1166.2	1164.8	1163.5	1160.7
10°	1153.8	1153.8	1152.4	1145.4	1144.1
12.5°	1131.6	1130.2	1124.7	1115.0	1112.2
15°	1101.1	1101.1	1090.0	1079.0	1074.8
17.5°	1067.9	1066.5	1052.6	1041.6	1036.0
20°	1031.9	1029.1	1015.2	997.2	987.5
22.5°	991.7	991.7	975.1	951.5	941.8
25°	954.3	948.8	933.5	900.3	875.4
27.5°	911.4	903.1	886.4	839.3	810.3
30°	864.3	860.1	836.6	775.6	753.5
32.5°	820.0	813.0	788.1	724.4	706.4
35°	774.2	768.7	731.3	675.9	659.3
37.5°	728.5	721.6	674.5	630.2	609.4
40°	682.8	674.5	623.3	583.1	560.9
42.5°	639.9	628.8	579.0	536.0	511.1
45°	594.2	581.7	531.9	487.5	468.2
47.5°	548.5	537.4	491.7	446.0	423.8
50°	500.0	490.3	448.8	403.1	379.5
52.5°	459.8	444.6	404.4	358.7	339.3
55°	412.7	400.3	362.9	319.9	303.3
57.5°	369.8	357.3	322.7	282.6	268.7
60°	329.6	311.6	282.6	247.9	236.8
62.5°	285.3	271.5	246.5	217.5	231.3
65°	245.2	231.3	209.1	213.3	177.3
67.5°	200.8	193.9	174.5	155.1	149.6
70°	163.4	155.1	148.2	127.4	121.9
72.5°	130.2	121.9	112.2	101.1	97.0
75°	98.3	91.4	85.9	81.7	90.0
77.5°	67.9	65.1	60.9	56.8	55.4
80°	44.3	42.9	41.6	40.2	38.8
82.5°	26.3	26.3	26.3	26.3	26.3
85°	13.9	15.2	16.6	18.0	19.4
87.5°	8.3	8.3	9.7	11.1	12.5
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)