

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: P547414

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-93-97-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: P547414
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-24-4-LD4-4LO-40-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

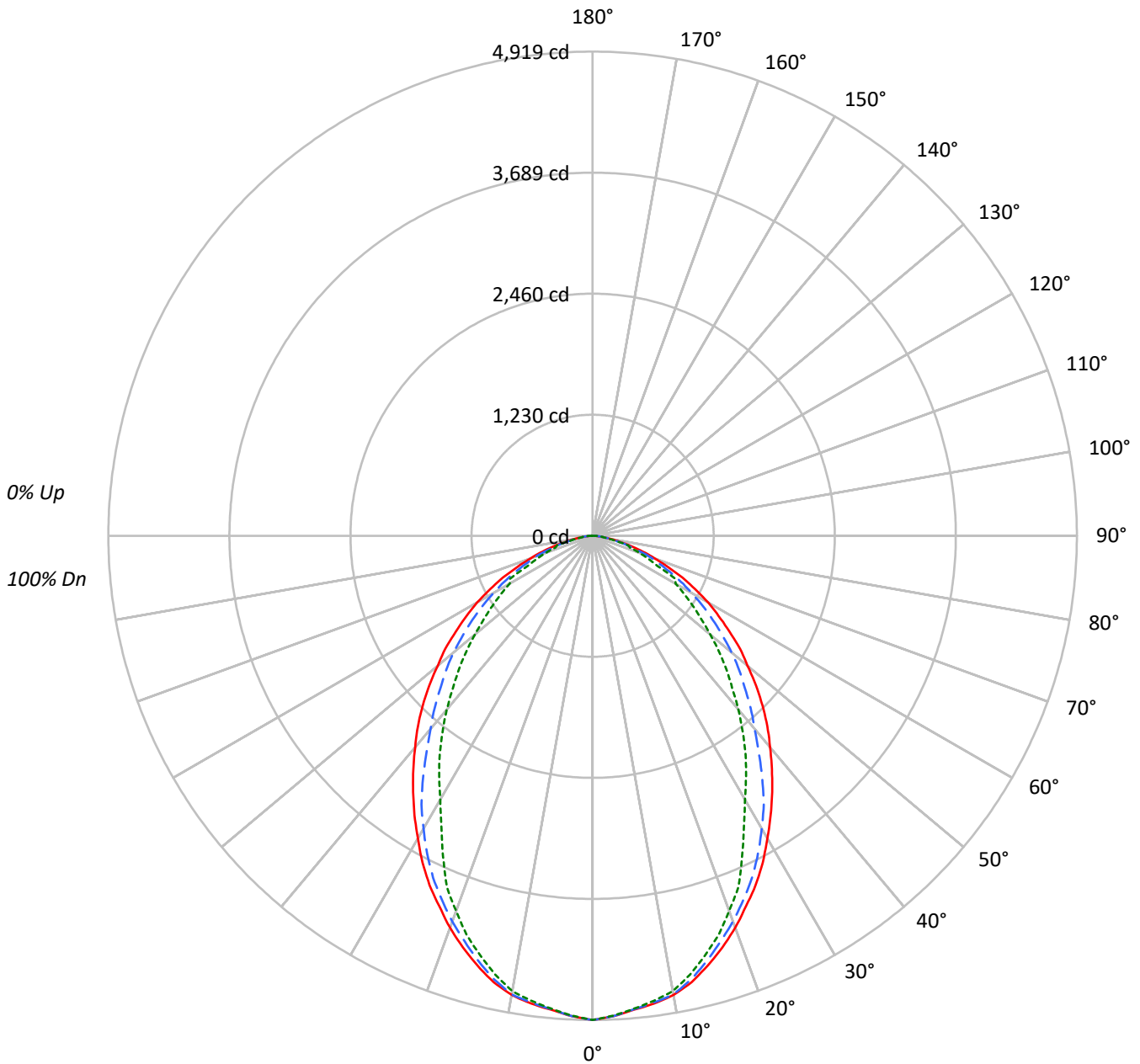
Lumens per Lamp: N/A
Luminaire Lumens: 9657.0 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6619	6619	6619
5°	6529	6521	6513
10°	6472	6464	6418
15°	6298	6234	6147
20°	6066	5969	5806
25°	5817	5690	5336
30°	5513	5337	4806
35°	5222	4932	4446
40°	4924	4495	4045
45°	4642	4155	3658
50°	4297	3857	3262
55°	3975	3495	2921
60°	3642	3122	2617
65°	3205	2734	2317
70°	2640	2394	1969
75°	2099	1833	1921
80°	1410	1322	1234
85°	878	1053	1229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	457.9	4.7
10°-20°	1256.7	13.0
20°-30°	1739.8	18.0
30°-40°	1855.1	19.2
40°-50°	1692.4	17.5
50°-60°	1325.9	13.7
60°-70°	864.1	8.9
70°-80°	382.8	4.0
80°-90°	82.2	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°	3454.4	35.8
0°-40°	5309.5	55.0
0°-60°	8327.8	86.2
0°-90°	9657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4919	4919	4919	4919	4919	
5°	4834	4828	4828	4822	4822	459
15°	4521	4521	4476	4430	4413	1271
25°	3918	3896	3833	3696	3594	1799
35°	3179	3156	3003	2775	2707	1987
45°	2440	2388	2184	2002	1922	1879
55°	1695	1644	1490	1314	1245	1520
65°	1007	950	859	876	728	992
75°	404	375	353	336	370	433
85°	57	63	68	74	80	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4919.1	4919.1	4919.1	4919.1	4919.1
2.5°	4885.0	4885.0	4885.0	4879.3	4879.3
5°	4833.8	4828.2	4828.2	4822.5	4822.5
7.5°	4794.0	4788.3	4782.7	4777.0	4765.6
10°	4737.2	4737.2	4731.5	4703.0	4697.4
12.5°	4646.2	4640.5	4617.7	4577.9	4566.6
15°	4521.1	4521.1	4475.6	4430.1	4413.0
17.5°	4384.6	4378.9	4322.0	4276.5	4253.8
20°	4236.7	4225.3	4168.5	4094.5	4054.7
22.5°	4071.8	4071.8	4003.6	3906.9	3867.1
25°	3918.3	3895.5	3833.0	3696.5	3594.1
27.5°	3742.0	3707.8	3639.6	3446.2	3326.8
30°	3548.6	3531.5	3434.9	3184.6	3093.7
32.5°	3366.6	3338.2	3235.8	2974.2	2900.3
35°	3179.0	3156.2	3002.7	2775.2	2707.0
37.5°	2991.3	2962.9	2769.5	2587.5	2502.2
40°	2803.6	2769.5	2559.1	2394.2	2303.2
42.5°	2627.3	2581.8	2377.1	2200.8	2098.5
45°	2439.7	2388.5	2183.8	2001.8	1922.2
47.5°	2252.0	2206.5	2018.8	1831.2	1740.2
50°	2053.0	2013.2	1842.5	1654.9	1558.2
52.5°	1888.0	1825.5	1660.6	1472.9	1393.3
55°	1694.7	1643.5	1490.0	1313.7	1245.4
57.5°	1518.4	1467.2	1325.0	1160.1	1103.3
60°	1353.5	1279.5	1160.1	1018.0	972.5
62.5°	1171.5	1114.6	1012.3	892.8	949.7
65°	1006.6	949.7	858.7	875.8	727.9
67.5°	824.6	796.2	716.5	636.9	614.2
70°	671.1	636.9	608.5	523.2	500.4
72.5°	534.6	500.4	460.6	415.1	398.1
75°	403.8	375.3	352.6	335.5	369.6
77.5°	278.7	267.3	250.2	233.2	227.5
80°	182.0	176.3	170.6	164.9	159.2
82.5°	108.1	108.1	108.1	108.1	108.1
85°	56.9	62.6	68.2	73.9	79.6
87.5°	34.1	34.1	39.8	45.5	51.2
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)