

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: P547120

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-93-85-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: P547120
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-LD4-3LO-40-UNV-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

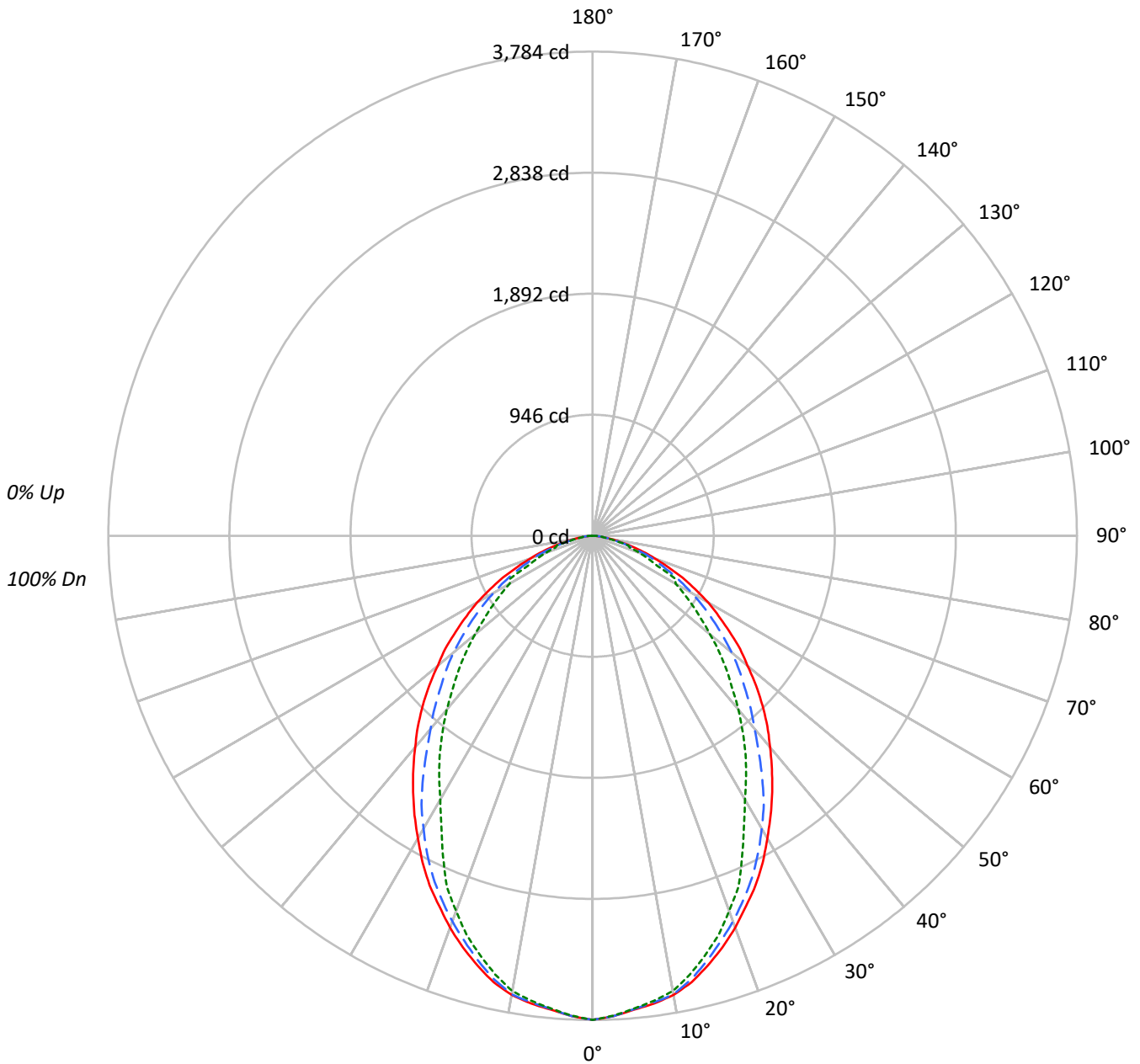
Lumens per Lamp: N/A
Luminaire Lumens: 7428.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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					
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								
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°	5091	5091	5091
5°	5022	5016	5010
10°	4978	4972	4936
15°	4844	4795	4728
20°	4666	4591	4466
25°	4474	4377	4104
30°	4241	4105	3697
35°	4016	3794	3420
40°	3788	3457	3112
45°	3571	3196	2813
50°	3305	2967	2509
55°	3058	2689	2247
60°	2802	2401	2013
65°	2465	2103	1783
70°	2031	1841	1514
75°	1615	1410	1478
80°	1085	1017	949
85°	675	810	945



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.2	4.7
10°-20°	966.6	13.0
20°-30°	1338.2	18.0
30°-40°	1426.9	19.2
40°-50°	1301.8	17.5
50°-60°	1019.8	13.7
60°-70°	664.7	8.9
70°-80°	294.5	4.0
80°-90°	63.2	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°	2657.1	35.8
0°-40°	4084.0	55.0
0°-60°	6405.6	86.2
0°-90°	7428.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7428.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3784	3784	3784	3784	3784	
5°	3718	3714	3714	3709	3709	353
15°	3478	3478	3442	3408	3394	978
25°	3014	2996	2948	2843	2764	1384
35°	2445	2428	2310	2135	2082	1529
45°	1877	1837	1680	1540	1478	1446
55°	1304	1264	1146	1010	958	1169
65°	774	730	660	674	560	763
75°	311	289	271	258	284	333
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3783.7	3783.7	3783.7	3783.7	3783.7
2.5°	3757.5	3757.5	3757.5	3753.1	3753.1
5°	3718.1	3713.7	3713.7	3709.4	3709.4
7.5°	3687.5	3683.1	3678.7	3674.4	3665.6
10°	3643.7	3643.7	3639.4	3617.5	3613.1
12.5°	3573.8	3569.4	3551.9	3521.3	3512.5
15°	3477.5	3477.5	3442.5	3407.5	3394.4
17.5°	3372.5	3368.2	3324.4	3289.4	3271.9
20°	3258.8	3250.1	3206.3	3149.5	3118.8
22.5°	3132.0	3132.0	3079.5	3005.1	2974.5
25°	3013.9	2996.4	2948.2	2843.3	2764.5
27.5°	2878.3	2852.0	2799.5	2650.8	2558.9
30°	2729.5	2716.4	2642.0	2449.6	2379.6
32.5°	2589.6	2567.7	2488.9	2287.7	2230.9
35°	2445.2	2427.7	2309.6	2134.6	2082.1
37.5°	2300.9	2279.0	2130.3	1990.3	1924.7
40°	2156.5	2130.3	1968.4	1841.6	1771.6
42.5°	2020.9	1985.9	1828.4	1692.8	1614.1
45°	1876.6	1837.2	1679.7	1539.7	1478.5
47.5°	1732.2	1697.2	1552.9	1408.5	1338.5
50°	1579.1	1548.5	1417.3	1272.9	1198.5
52.5°	1452.3	1404.1	1277.3	1132.9	1071.7
55°	1303.5	1264.2	1146.1	1010.5	958.0
57.5°	1167.9	1128.6	1019.2	892.3	848.6
60°	1041.1	984.2	892.3	783.0	748.0
62.5°	901.1	857.4	778.6	686.8	730.5
65°	774.2	730.5	660.5	673.6	559.9
67.5°	634.3	612.4	551.2	489.9	472.4
70°	516.2	489.9	468.0	402.4	384.9
72.5°	411.2	384.9	354.3	319.3	306.2
75°	310.6	288.7	271.2	258.1	284.3
77.5°	214.3	205.6	192.5	179.3	175.0
80°	140.0	135.6	131.2	126.9	122.5
82.5°	83.1	83.1	83.1	83.1	83.1
85°	43.7	48.1	52.5	56.9	61.2
87.5°	26.2	26.2	30.6	35.0	39.4
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)