

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: P547520

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-81-85-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: P547520
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-LD4-4STD-50-UNV-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

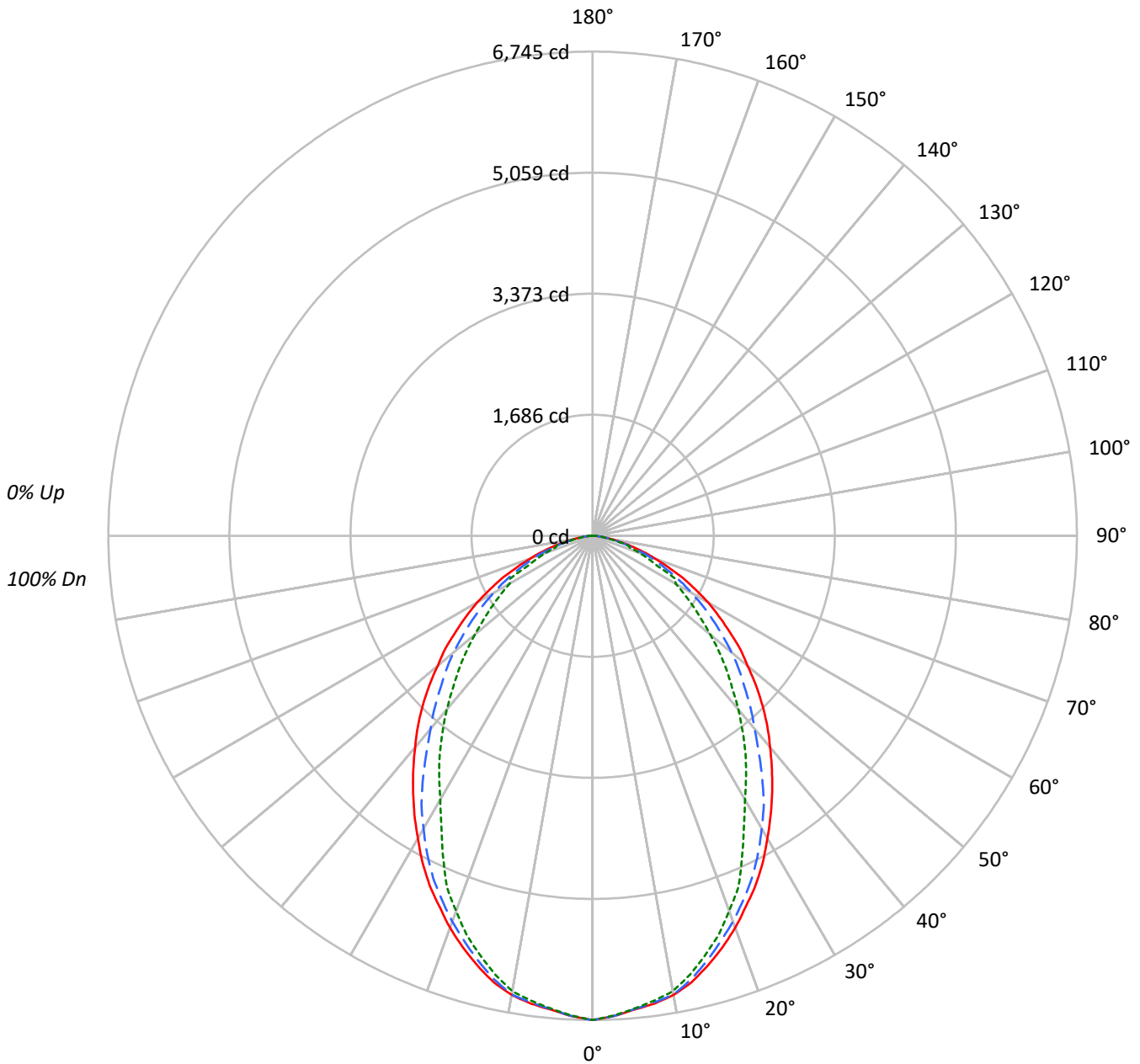
Lumens per Lamp: N/A
Luminaire Lumens: 13242.0 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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									
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°	9076	9076	9076
5°	8952	8942	8931
10°	8875	8864	8800
15°	8635	8549	8429
20°	8318	8184	7961
25°	7976	7803	7317
30°	7560	7318	6591
35°	7160	6763	6097
40°	6752	6163	5547
45°	6366	5698	5015
50°	5893	5289	4473
55°	5451	4793	4006
60°	4994	4281	3588
65°	4394	3749	3178
70°	3620	3282	2699
75°	2878	2514	2635
80°	1933	1812	1691
85°	1204	1445	1686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	627.9	4.7
10°-20°	1723.2	13.0
20°-30°	2385.7	18.0
30°-40°	2543.8	19.2
40°-50°	2320.7	17.5
50°-60°	1818.1	13.7
60°-70°	1184.9	8.9
70°-80°	525.0	4.0
80°-90°	112.7	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°	4736.8	35.8
0°-40°	7280.6	55.0
0°-60°	11419.4	86.2
0°-90°	13242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13242.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6745	6745	6745	6745	6745	
5°	6628	6620	6620	6613	6613	629
15°	6199	6199	6137	6075	6051	1743
25°	5373	5342	5256	5069	4928	2467
35°	4359	4328	4117	3805	3712	2725
45°	3345	3275	2994	2745	2636	2577
55°	2324	2254	2043	1801	1708	2084
65°	1380	1302	1178	1201	998	1360
75°	554	515	484	460	507	593
85°	78	86	94	101	109	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6745.3	6745.3	6745.3	6745.3	6745.3
2.5°	6698.5	6698.5	6698.5	6690.7	6690.7
5°	6628.3	6620.5	6620.5	6612.7	6612.7
7.5°	6573.7	6565.9	6558.1	6550.3	6534.8
10°	6495.8	6495.8	6488.0	6449.0	6441.2
12.5°	6371.0	6363.2	6332.0	6277.4	6261.8
15°	6199.4	6199.4	6137.1	6074.7	6051.3
17.5°	6012.3	6004.5	5926.5	5864.1	5832.9
20°	5809.5	5793.9	5716.0	5614.6	5560.0
22.5°	5583.4	5583.4	5489.8	5357.2	5302.7
25°	5372.8	5341.7	5255.9	5068.7	4928.4
27.5°	5131.1	5084.3	4990.7	4725.6	4561.8
30°	4866.0	4842.6	4710.0	4366.9	4242.1
32.5°	4616.4	4577.4	4437.1	4078.4	3977.0
35°	4359.1	4327.9	4117.4	3805.4	3711.9
37.5°	4101.8	4062.8	3797.6	3548.1	3431.1
40°	3844.4	3797.6	3509.1	3283.0	3158.2
42.5°	3602.7	3540.3	3259.6	3017.8	2877.5
45°	3345.4	3275.2	2994.4	2744.9	2635.7
47.5°	3088.0	3025.6	2768.3	2511.0	2386.2
50°	2815.1	2760.5	2526.6	2269.2	2136.7
52.5°	2588.9	2503.2	2277.0	2019.7	1910.5
55°	2323.8	2253.6	2043.1	1801.3	1707.8
57.5°	2082.1	2011.9	1816.9	1590.8	1512.8
60°	1855.9	1754.6	1590.8	1395.8	1333.5
62.5°	1606.4	1528.4	1388.0	1224.3	1302.3
65°	1380.3	1302.3	1177.5	1200.9	998.1
67.5°	1130.7	1091.7	982.6	873.4	842.2
70°	920.2	873.4	834.4	717.4	686.2
72.5°	733.0	686.2	631.6	569.3	545.9
75°	553.7	514.7	483.5	460.1	506.9
77.5°	382.1	366.5	343.1	319.7	311.9
80°	249.5	241.7	233.9	226.1	218.3
82.5°	148.2	148.2	148.2	148.2	148.2
85°	78.0	85.8	93.6	101.4	109.2
87.5°	46.8	46.8	54.6	62.4	70.2
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)