

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: P547240

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-82-85-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: P547240
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-LD4-3STD-50-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 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

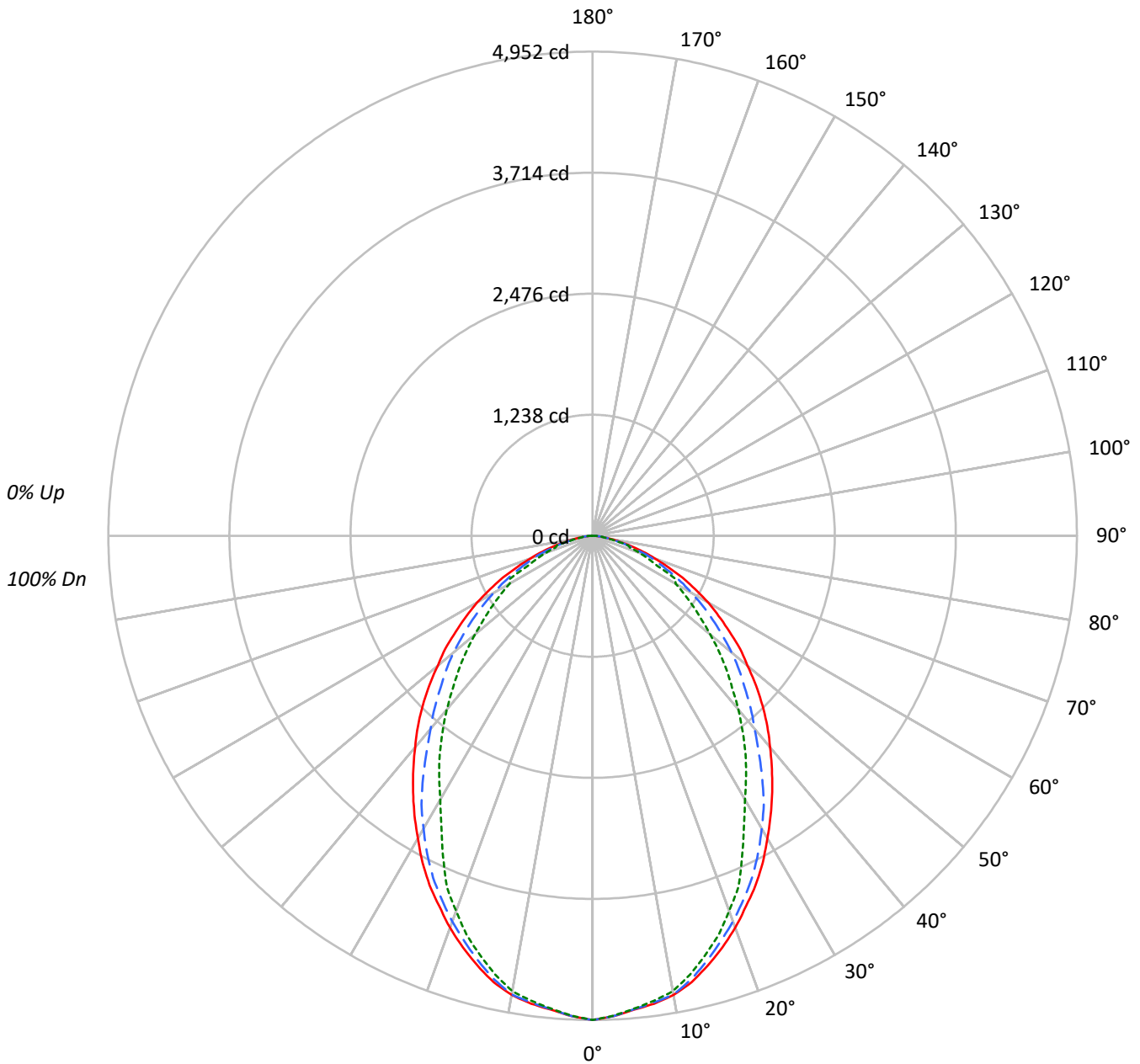
Lumens per Lamp: N/A
Luminaire Lumens: 9722.0 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6663	6663	6663
5°	6573	6565	6557
10°	6516	6508	6461
15°	6340	6276	6188
20°	6107	6009	5845
25°	5856	5729	5372
30°	5550	5372	4839
35°	5257	4965	4476
40°	4957	4525	4073
45°	4673	4183	3682
50°	4326	3883	3284
55°	4002	3519	2941
60°	3667	3143	2634
65°	3226	2752	2333
70°	2658	2410	1982
75°	2113	1845	1934
80°	1420	1331	1242
85°	885	1061	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	461.0	4.7
10°-20°	1265.1	13.0
20°-30°	1751.5	18.0
30°-40°	1867.6	19.2
40°-50°	1703.8	17.5
50°-60°	1334.8	13.7
60°-70°	870.0	8.9
70°-80°	385.4	4.0
80°-90°	82.8	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°	3477.6	35.8
0°-40°	5345.3	55.0
0°-60°	8383.9	86.2
0°-90°	9722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4952	4952	4952	4952	4952	
5°	4866	4861	4861	4855	4855	462
15°	4552	4552	4506	4460	4443	1280
25°	3945	3922	3859	3721	3618	1811
35°	3200	3178	3023	2794	2725	2001
45°	2456	2405	2198	2015	1935	1892
55°	1706	1655	1500	1322	1254	1530
65°	1013	956	864	882	733	999
75°	406	378	355	338	372	436
85°	57	63	69	74	80	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4952.3	4952.3	4952.3	4952.3	4952.3
2.5°	4917.9	4917.9	4917.9	4912.2	4912.2
5°	4866.4	4860.7	4860.7	4854.9	4854.9
7.5°	4826.3	4820.6	4814.9	4809.1	4797.7
10°	4769.1	4769.1	4763.3	4734.7	4729.0
12.5°	4677.4	4671.7	4648.8	4608.7	4597.3
15°	4551.5	4551.5	4505.7	4459.9	4442.7
17.5°	4414.1	4408.4	4351.1	4305.3	4282.4
20°	4265.2	4253.8	4196.5	4122.1	4082.0
22.5°	4099.2	4099.2	4030.5	3933.2	3893.1
25°	3944.6	3921.7	3858.8	3721.3	3618.3
27.5°	3767.2	3732.8	3664.1	3469.4	3349.2
30°	3572.5	3555.3	3458.0	3206.1	3114.5
32.5°	3389.3	3360.7	3257.6	2994.3	2919.8
35°	3200.4	3177.5	3022.9	2793.9	2725.2
37.5°	3011.4	2982.8	2788.1	2604.9	2519.1
40°	2822.5	2788.1	2576.3	2410.3	2318.7
42.5°	2645.0	2599.2	2393.1	2215.6	2112.6
45°	2456.1	2404.6	2198.5	2015.3	1935.1
47.5°	2267.2	2221.4	2032.4	1843.5	1751.9
50°	2066.8	2026.7	1854.9	1666.0	1568.7
52.5°	1900.8	1837.8	1671.7	1482.8	1402.7
55°	1706.1	1654.6	1500.0	1322.5	1253.8
57.5°	1528.6	1477.1	1334.0	1167.9	1110.7
60°	1362.6	1288.2	1167.9	1024.8	979.0
62.5°	1179.4	1122.1	1019.1	898.8	956.1
65°	1013.4	956.1	864.5	881.7	732.8
67.5°	830.1	801.5	721.4	641.2	618.3
70°	675.6	641.2	612.6	526.7	503.8
72.5°	538.2	503.8	463.7	417.9	400.8
75°	406.5	377.9	355.0	337.8	372.1
77.5°	280.5	269.1	251.9	234.7	229.0
80°	183.2	177.5	171.8	166.0	160.3
82.5°	108.8	108.8	108.8	108.8	108.8
85°	57.3	63.0	68.7	74.4	80.2
87.5°	34.4	34.4	40.1	45.8	51.5
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)