

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: P547485

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-80-96-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: P547485
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-40-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

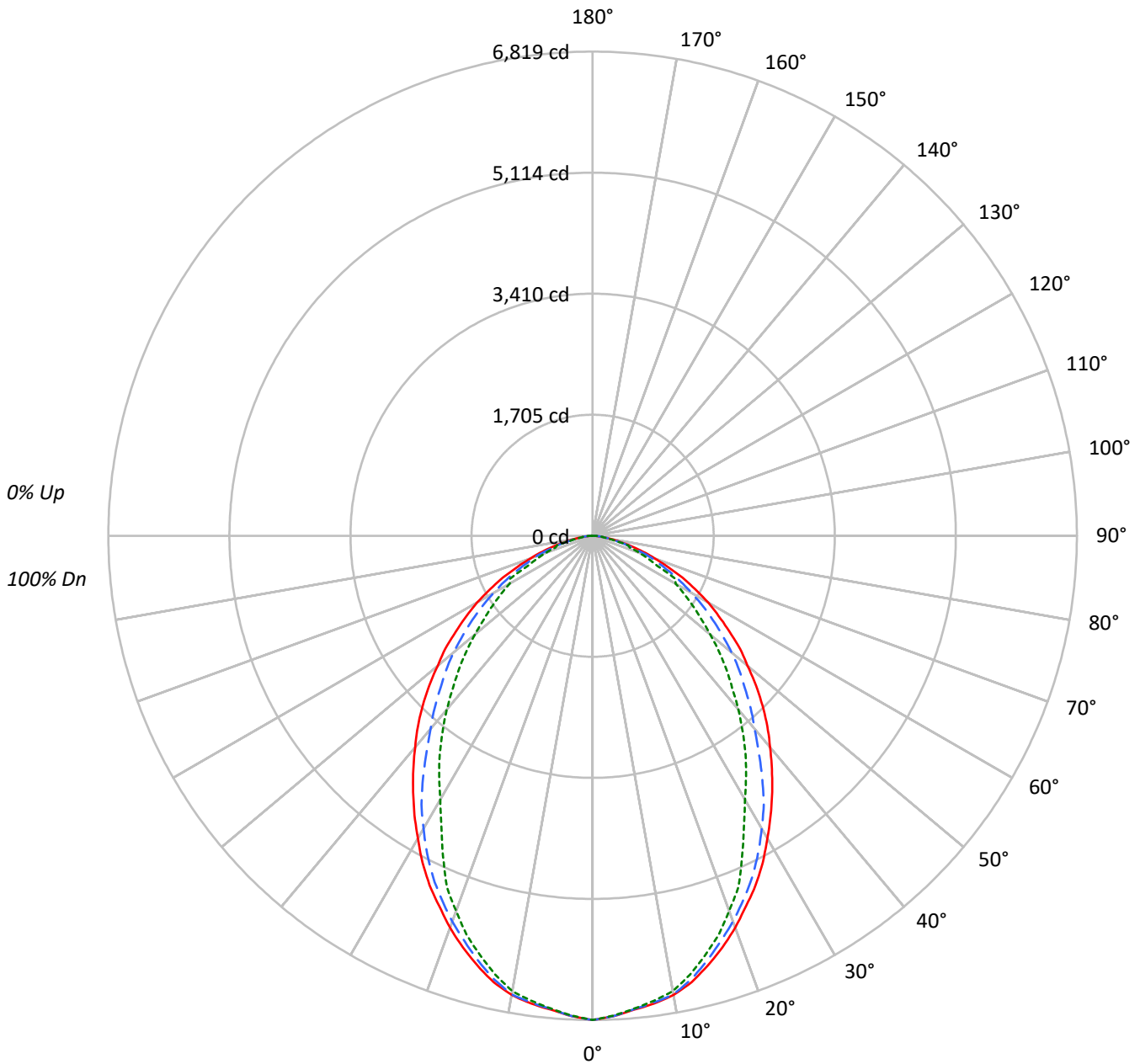
Lumens per Lamp: N/A
Luminaire Lumens: 13387.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	9175	9175	9175
5°	9050	9040	9029
10°	8972	8961	8897
15°	8730	8642	8521
20°	8409	8274	8048
25°	8064	7888	7397
30°	7643	7398	6663
35°	7238	6837	6164
40°	6826	6231	5608
45°	6435	5760	5070
50°	5957	5346	4522
55°	5511	4845	4050
60°	5049	4328	3628
65°	4443	3790	3213
70°	3659	3318	2729
75°	2910	2541	2664
80°	1955	1832	1710
85°	1216	1460	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	634.8	4.7
10°-20°	1742.1	13.0
20°-30°	2411.8	18.0
30°-40°	2571.7	19.2
40°-50°	2346.1	17.5
50°-60°	1838.0	13.7
60°-70°	1197.9	8.9
70°-80°	530.7	4.0
80°-90°	114.0	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°	4788.6	35.8
0°-40°	7360.3	55.0
0°-60°	11544.4	86.2
0°-90°	13387.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13387.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6819	6819	6819	6819	6819	
5°	6701	6693	6693	6685	6685	636
15°	6267	6267	6204	6141	6118	1762
25°	5432	5400	5313	5124	4982	2494
35°	4407	4375	4162	3847	3752	2755
45°	3382	3311	3027	2775	2665	2605
55°	2349	2278	2066	1821	1726	2107
65°	1395	1316	1190	1214	1009	1375
75°	560	520	489	465	512	600
85°	79	87	95	102	110	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6819.2	6819.2	6819.2	6819.2	6819.2
2.5°	6771.9	6771.9	6771.9	6764.0	6764.0
5°	6700.9	6693.0	6693.0	6685.1	6685.1
7.5°	6645.7	6637.8	6630.0	6622.1	6606.3
10°	6566.9	6566.9	6559.0	6519.6	6511.7
12.5°	6440.8	6432.9	6401.3	6346.2	6330.4
15°	6267.3	6267.3	6204.3	6141.2	6117.5
17.5°	6078.1	6070.2	5991.4	5928.3	5896.8
20°	5873.1	5857.4	5778.5	5676.1	5620.9
22.5°	5644.5	5644.5	5549.9	5415.9	5360.7
25°	5431.7	5400.1	5313.4	5124.2	4982.3
27.5°	5187.3	5140.0	5045.4	4777.4	4611.8
30°	4919.3	4895.6	4761.6	4414.7	4288.6
32.5°	4667.0	4627.6	4485.7	4123.0	4020.5
35°	4406.8	4375.3	4162.4	3847.1	3752.5
37.5°	4146.7	4107.3	3839.2	3587.0	3468.7
40°	3886.5	3839.2	3547.5	3318.9	3192.8
42.5°	3642.1	3579.1	3295.3	3050.9	2909.0
45°	3382.0	3311.0	3027.2	2775.0	2664.6
47.5°	3121.8	3058.8	2798.6	2538.5	2412.3
50°	2845.9	2790.7	2554.2	2294.1	2160.1
52.5°	2617.3	2530.6	2302.0	2041.8	1931.4
55°	2349.3	2278.3	2065.5	1821.1	1726.5
57.5°	2104.9	2033.9	1836.8	1608.2	1529.4
60°	1876.3	1773.8	1608.2	1411.1	1348.1
62.5°	1624.0	1545.2	1403.2	1237.7	1316.5
65°	1395.4	1316.5	1190.4	1214.0	1009.1
67.5°	1143.1	1103.7	993.3	882.9	851.4
70°	930.2	882.9	843.5	725.3	693.7
72.5°	741.0	693.7	638.6	575.5	551.8
75°	559.7	520.3	488.8	465.1	512.4
77.5°	386.3	370.5	346.9	323.2	315.3
80°	252.3	244.4	236.5	228.6	220.7
82.5°	149.8	149.8	149.8	149.8	149.8
85°	78.8	86.7	94.6	102.5	110.4
87.5°	47.3	47.3	55.2	63.1	71.0
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)