

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: P547436

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-82-94-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: P547436
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-50-UNV-82-94-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

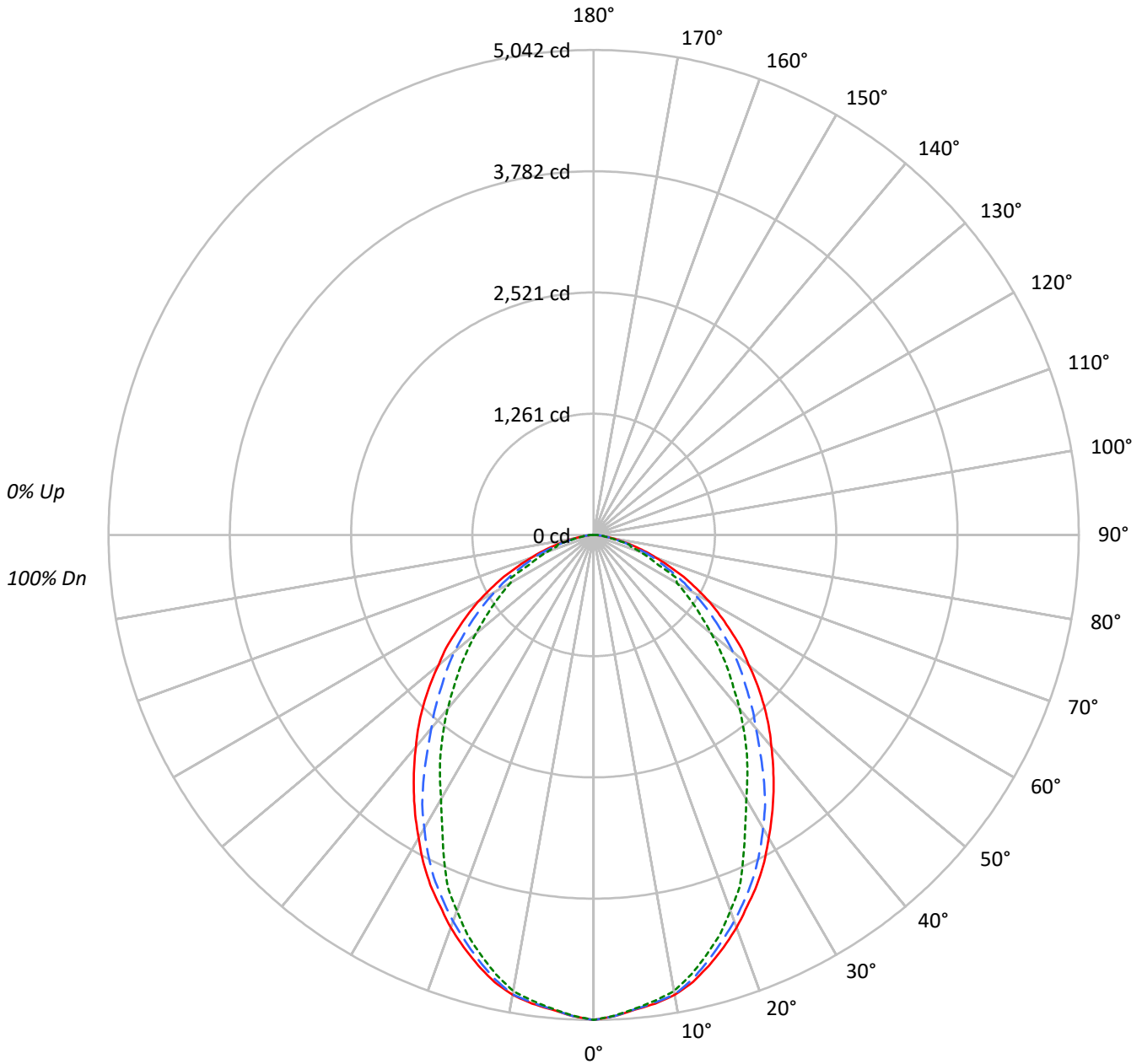
Lumens per Lamp: N/A
Luminaire Lumens: 9899.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6784	6784	6784
5°	6692	6684	6677
10°	6634	6626	6579
15°	6456	6390	6301
20°	6218	6118	5951
25°	5963	5833	5470
30°	5651	5470	4927
35°	5352	5056	4558
40°	5048	4607	4147
45°	4759	4259	3749
50°	4405	3953	3343
55°	4075	3583	2995
60°	3733	3200	2682
65°	3285	2802	2376
70°	2706	2454	2018
75°	2152	1879	1970
80°	1445	1355	1265
85°	900	1081	1260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	469.4	4.7
10°-20°	1288.2	13.0
20°-30°	1783.4	18.0
30°-40°	1901.6	19.2
40°-50°	1734.8	17.5
50°-60°	1359.1	13.7
60°-70°	885.8	8.9
70°-80°	392.4	4.0
80°-90°	84.3	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°	3541.0	35.8
0°-40°	5442.6	55.0
0°-60°	8536.5	86.2
0°-90°	9899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5042	5042	5042	5042	5042	
5°	4955	4949	4949	4943	4943	470
15°	4634	4634	4588	4541	4524	1303
25°	4016	3993	3929	3789	3684	1844
35°	3259	3235	3078	2845	2775	2037
45°	2501	2448	2238	2052	1970	1926
55°	1737	1685	1527	1347	1277	1558
65°	1032	974	880	898	746	1017
75°	414	385	361	344	379	444
85°	58	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5042.4	5042.4	5042.4	5042.4	5042.4
2.5°	5007.4	5007.4	5007.4	5001.6	5001.6
5°	4955.0	4949.1	4949.1	4943.3	4943.3
7.5°	4914.2	4908.3	4902.5	4896.7	4885.0
10°	4855.9	4855.9	4850.0	4820.9	4815.1
12.5°	4762.6	4756.8	4733.5	4692.7	4681.0
15°	4634.4	4634.4	4587.7	4541.1	4523.6
17.5°	4494.5	4488.6	4430.3	4383.7	4360.4
20°	4342.9	4331.2	4272.9	4197.2	4156.4
22.5°	4173.8	4173.8	4103.9	4004.8	3964.0
25°	4016.4	3993.1	3929.0	3789.1	3684.2
27.5°	3835.7	3800.8	3730.8	3532.6	3410.2
30°	3637.5	3620.0	3520.9	3264.5	3171.2
32.5°	3451.0	3421.8	3316.9	3048.8	2973.0
35°	3258.6	3235.3	3077.9	2844.7	2774.8
37.5°	3066.3	3037.1	2838.9	2652.4	2564.9
40°	2873.9	2838.9	2623.2	2454.2	2360.9
42.5°	2693.2	2646.5	2436.7	2256.0	2151.0
45°	2500.8	2448.3	2238.5	2051.9	1970.3
47.5°	2308.4	2261.8	2069.4	1877.1	1783.8
50°	2104.4	2063.6	1888.7	1696.4	1597.3
52.5°	1935.4	1871.2	1702.2	1509.8	1428.2
55°	1737.2	1684.7	1527.3	1346.6	1276.6
57.5°	1556.4	1504.0	1358.2	1189.2	1130.9
60°	1387.4	1311.6	1189.2	1043.5	996.8
62.5°	1200.9	1142.6	1037.6	915.2	973.5
65°	1031.8	973.5	880.2	897.7	746.2
67.5°	845.3	816.1	734.5	652.9	629.6
70°	687.9	652.9	623.7	536.3	513.0
72.5°	548.0	513.0	472.2	425.5	408.1
75°	413.9	384.7	361.4	343.9	378.9
77.5°	285.6	274.0	256.5	239.0	233.2
80°	186.5	180.7	174.9	169.1	163.2
82.5°	110.8	110.8	110.8	110.8	110.8
85°	58.3	64.1	70.0	75.8	81.6
87.5°	35.0	35.0	40.8	46.6	52.5
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)