

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: P547264

Luminaire Tested: **FMR-24-4-LD4-4HI-35-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: P547264
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-LD4-4HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

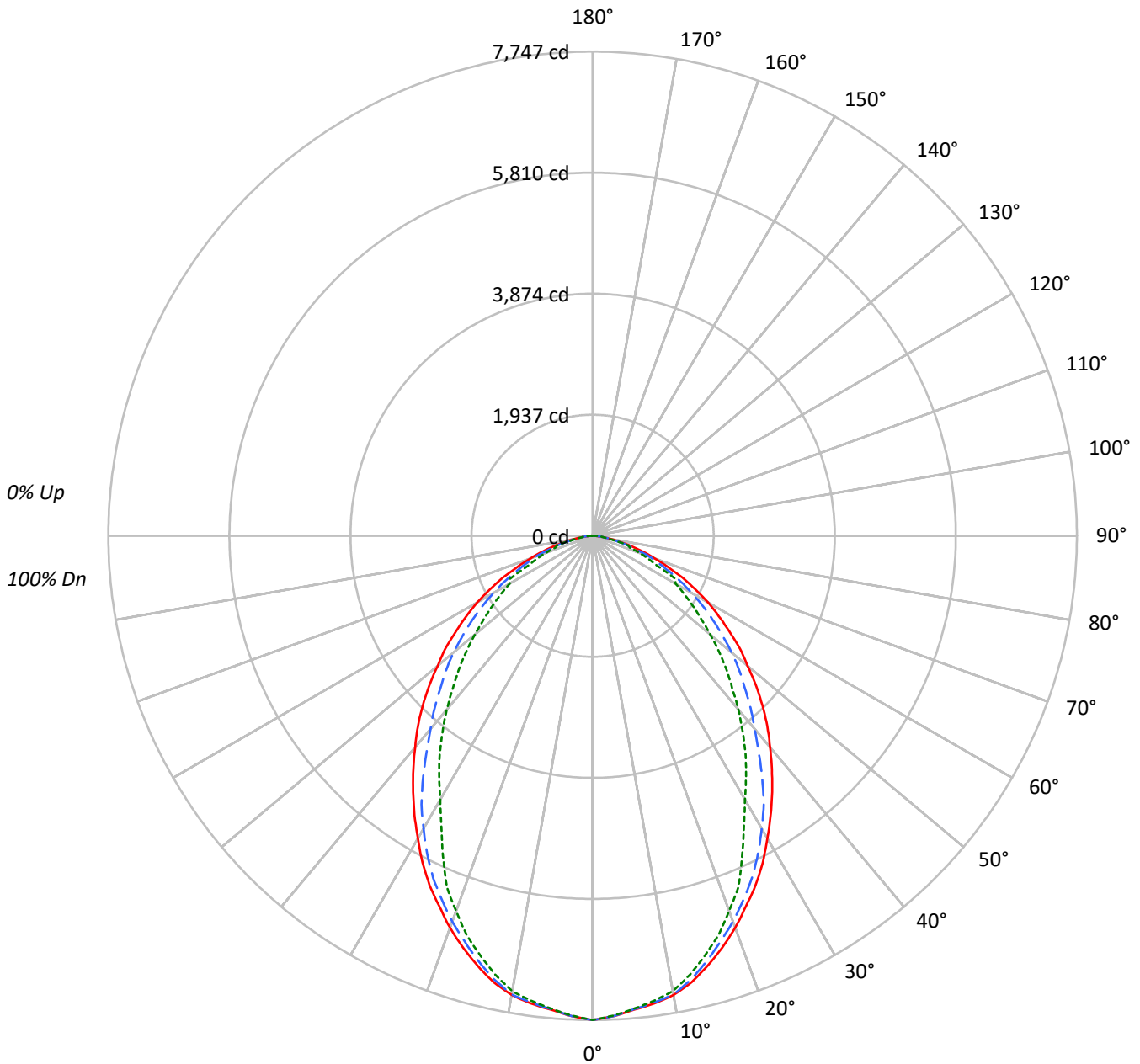
Lumens per Lamp: N/A
Luminaire Lumens: 15209.0 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	10424	10424	10424
5°	10282	10270	10258
10°	10193	10181	10107
15°	9918	9819	9681
20°	9554	9400	9144
25°	9161	8962	8403
30°	8683	8405	7570
35°	8224	7768	7002
40°	7755	7079	6371
45°	7311	6544	5760
50°	6768	6074	5137
55°	6261	5505	4601
60°	5736	4917	4121
65°	5047	4306	3650
70°	4158	3770	3101
75°	3306	2887	3027
80°	2221	2082	1943
85°	1383	1660	1936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	721.2	4.7
10°-20°	1979.2	13.0
20°-30°	2740.0	18.0
30°-40°	2921.7	19.2
40°-50°	2665.4	17.5
50°-60°	2088.1	13.7
60°-70°	1360.9	8.9
70°-80°	603.0	4.0
80°-90°	129.5	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°	5440.4	35.8
0°-40°	8362.1	55.0
0°-60°	13115.6	86.2
0°-90°	15209.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15209.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7747	7747	7747	7747	7747	
5°	7613	7604	7604	7595	7595	723
15°	7120	7120	7049	6977	6950	2002
25°	6171	6135	6037	5822	5660	2833
35°	5007	4971	4729	4371	4263	3130
45°	3842	3762	3439	3153	3027	2960
55°	2669	2588	2347	2069	1961	2394
65°	1585	1496	1352	1379	1146	1562
75°	636	591	555	528	582	682
85°	90	98	108	116	125	124
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7747.3	7747.3	7747.3	7747.3	7747.3
2.5°	7693.5	7693.5	7693.5	7684.6	7684.6
5°	7612.9	7604.0	7604.0	7595.0	7595.0
7.5°	7550.2	7541.3	7532.3	7523.4	7505.4
10°	7460.7	7460.7	7451.7	7406.9	7398.0
12.5°	7317.4	7308.4	7272.6	7209.9	7192.0
15°	7120.3	7120.3	7048.7	6977.0	6950.1
17.5°	6905.4	6896.4	6806.8	6735.2	6699.4
20°	6672.5	6654.6	6565.0	6448.6	6385.9
22.5°	6412.8	6412.8	6305.3	6153.0	6090.3
25°	6170.9	6135.1	6036.6	5821.6	5660.4
27.5°	5893.3	5839.6	5732.1	5427.6	5239.5
30°	5588.8	5561.9	5409.6	5015.6	4872.3
32.5°	5302.2	5257.4	5096.2	4684.2	4567.7
35°	5006.6	4970.8	4729.0	4370.7	4263.2
37.5°	4711.1	4666.3	4361.8	4075.1	3940.8
40°	4415.5	4361.8	4030.4	3770.6	3627.3
42.5°	4137.8	4066.2	3743.8	3466.1	3304.9
45°	3842.3	3761.7	3439.2	3152.6	3027.3
47.5°	3546.7	3475.1	3179.5	2884.0	2740.6
50°	3233.3	3170.6	2901.9	2606.3	2454.0
52.5°	2973.5	2875.0	2615.3	2319.7	2194.3
55°	2669.0	2588.4	2346.6	2068.9	1961.4
57.5°	2391.4	2310.7	2086.8	1827.1	1737.5
60°	2131.6	2015.2	1827.1	1603.2	1531.5
62.5°	1845.0	1755.4	1594.2	1406.2	1495.7
65°	1585.3	1495.7	1352.4	1379.3	1146.4
67.5°	1298.7	1253.9	1128.5	1003.1	967.3
70°	1056.9	1003.1	958.3	824.0	788.2
72.5°	841.9	788.2	725.5	653.8	626.9
75°	635.9	591.1	555.3	528.4	582.2
77.5°	438.9	420.9	394.1	367.2	358.3
80°	286.6	277.6	268.7	259.7	250.8
82.5°	170.2	170.2	170.2	170.2	170.2
85°	89.6	98.5	107.5	116.4	125.4
87.5°	53.7	53.7	62.7	71.7	80.6
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)