

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: P547514

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-80-87-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: P547514
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

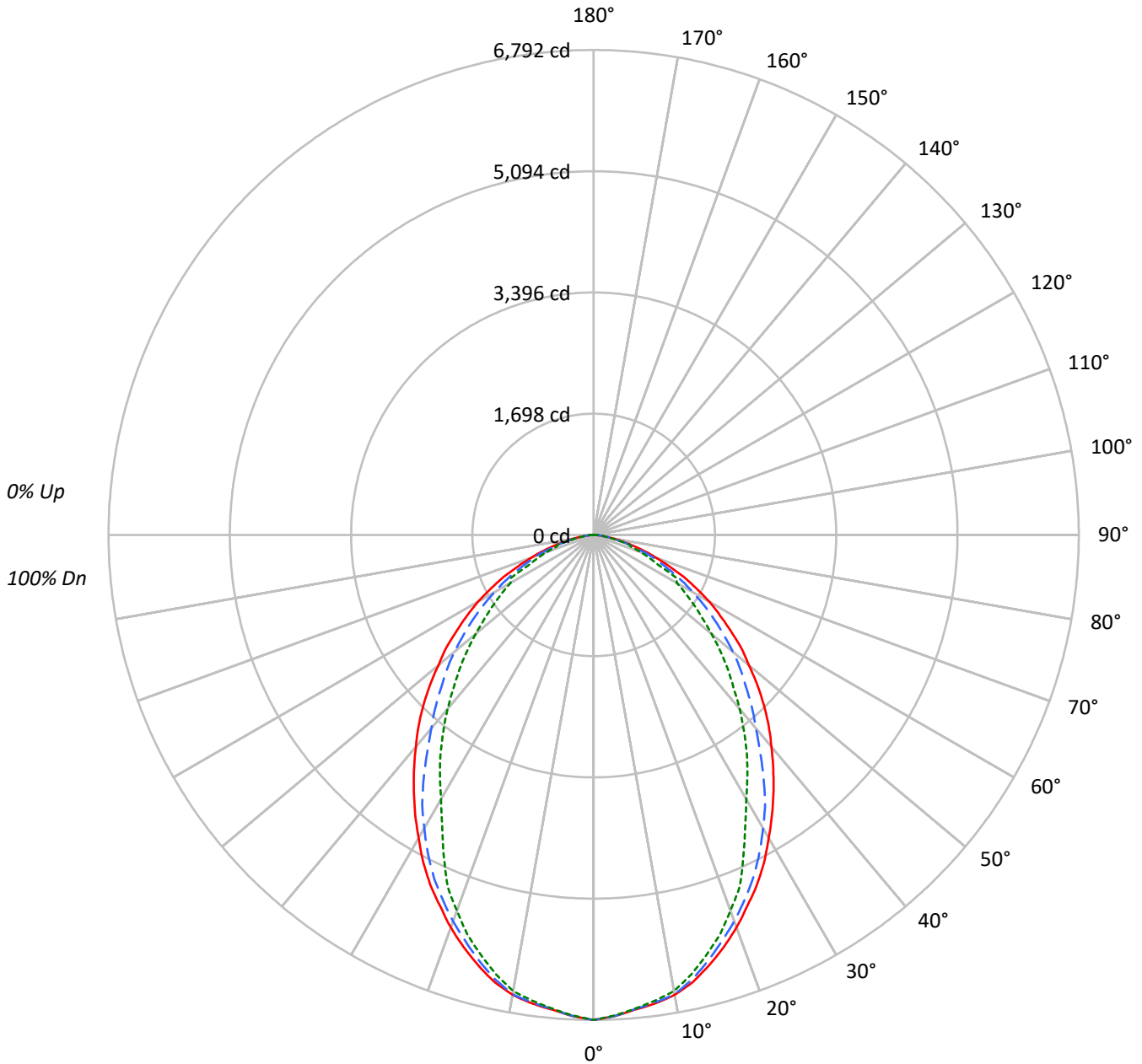
Lumens per Lamp: N/A
Luminaire Lumens: 13334.0 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	9139	9139	9139
5°	9015	9004	8993
10°	8936	8926	8861
15°	8696	8608	8488
20°	8376	8241	8016
25°	8032	7857	7367
30°	7613	7368	6637
35°	7210	6810	6139
40°	6799	6206	5586
45°	6410	5737	5050
50°	5933	5325	4504
55°	5489	4826	4034
60°	5029	4311	3613
65°	4425	3775	3200
70°	3645	3305	2718
75°	2898	2531	2653
80°	1947	1826	1704
85°	1212	1454	1697



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	632.3	4.7
10°-20°	1735.2	13.0
20°-30°	2402.2	18.0
30°-40°	2561.5	19.2
40°-50°	2336.8	17.5
50°-60°	1830.7	13.7
60°-70°	1193.2	8.9
70°-80°	528.6	4.0
80°-90°	113.5	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°	4769.7	35.8
0°-40°	7331.2	55.0
0°-60°	11498.7	86.2
0°-90°	13334.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13334.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6792	6792	6792	6792	6792	
5°	6674	6666	6666	6659	6659	634
15°	6242	6242	6180	6117	6093	1755
25°	5410	5379	5292	5104	4963	2484
35°	4389	4358	4146	3832	3738	2744
45°	3369	3298	3015	2764	2654	2595
55°	2340	2269	2057	1814	1720	2099
65°	1390	1311	1186	1209	1005	1370
75°	558	518	487	463	510	598
85°	78	86	94	102	110	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6792.2	6792.2	6792.2	6792.2	6792.2
2.5°	6745.0	6745.0	6745.0	6737.2	6737.2
5°	6674.4	6666.5	6666.5	6658.7	6658.7
7.5°	6619.4	6611.6	6603.7	6595.9	6580.2
10°	6540.9	6540.9	6533.0	6493.8	6485.9
12.5°	6415.3	6407.4	6376.0	6321.0	6305.3
15°	6242.5	6242.5	6179.7	6116.9	6093.3
17.5°	6054.1	6046.2	5967.7	5904.9	5873.5
20°	5849.9	5834.2	5755.7	5653.6	5598.6
22.5°	5622.2	5622.2	5528.0	5394.5	5339.5
25°	5410.2	5378.8	5292.4	5103.9	4962.6
27.5°	5166.8	5119.6	5025.4	4758.4	4593.5
30°	4899.8	4876.2	4742.7	4397.2	4271.6
32.5°	4648.5	4609.2	4467.9	4106.7	4004.6
35°	4389.4	4358.0	4146.0	3831.9	3737.7
37.5°	4130.3	4091.0	3824.0	3572.8	3455.0
40°	3871.1	3824.0	3533.5	3305.8	3180.1
42.5°	3627.7	3564.9	3282.2	3038.8	2897.5
45°	3368.6	3297.9	3015.2	2764.0	2654.0
47.5°	3109.5	3046.7	2787.5	2528.4	2402.8
50°	2834.6	2779.7	2544.1	2285.0	2151.5
52.5°	2606.9	2520.6	2292.8	2033.7	1923.8
55°	2340.0	2269.3	2057.3	1813.9	1719.6
57.5°	2096.5	2025.9	1829.6	1601.9	1523.3
60°	1868.8	1766.7	1601.9	1405.5	1342.7
62.5°	1617.6	1539.0	1397.7	1232.8	1311.3
65°	1389.8	1311.3	1185.7	1209.2	1005.1
67.5°	1138.6	1099.3	989.4	879.4	848.0
70°	926.6	879.4	840.2	722.4	691.0
72.5°	738.1	691.0	636.0	573.2	549.7
75°	557.5	518.2	486.8	463.3	510.4
77.5°	384.8	369.1	345.5	321.9	314.1
80°	251.3	243.4	235.6	227.7	219.9
82.5°	149.2	149.2	149.2	149.2	149.2
85°	78.5	86.4	94.2	102.1	109.9
87.5°	47.1	47.1	55.0	62.8	70.7
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)