

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: P547337

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-82-86-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: P547337
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-50-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

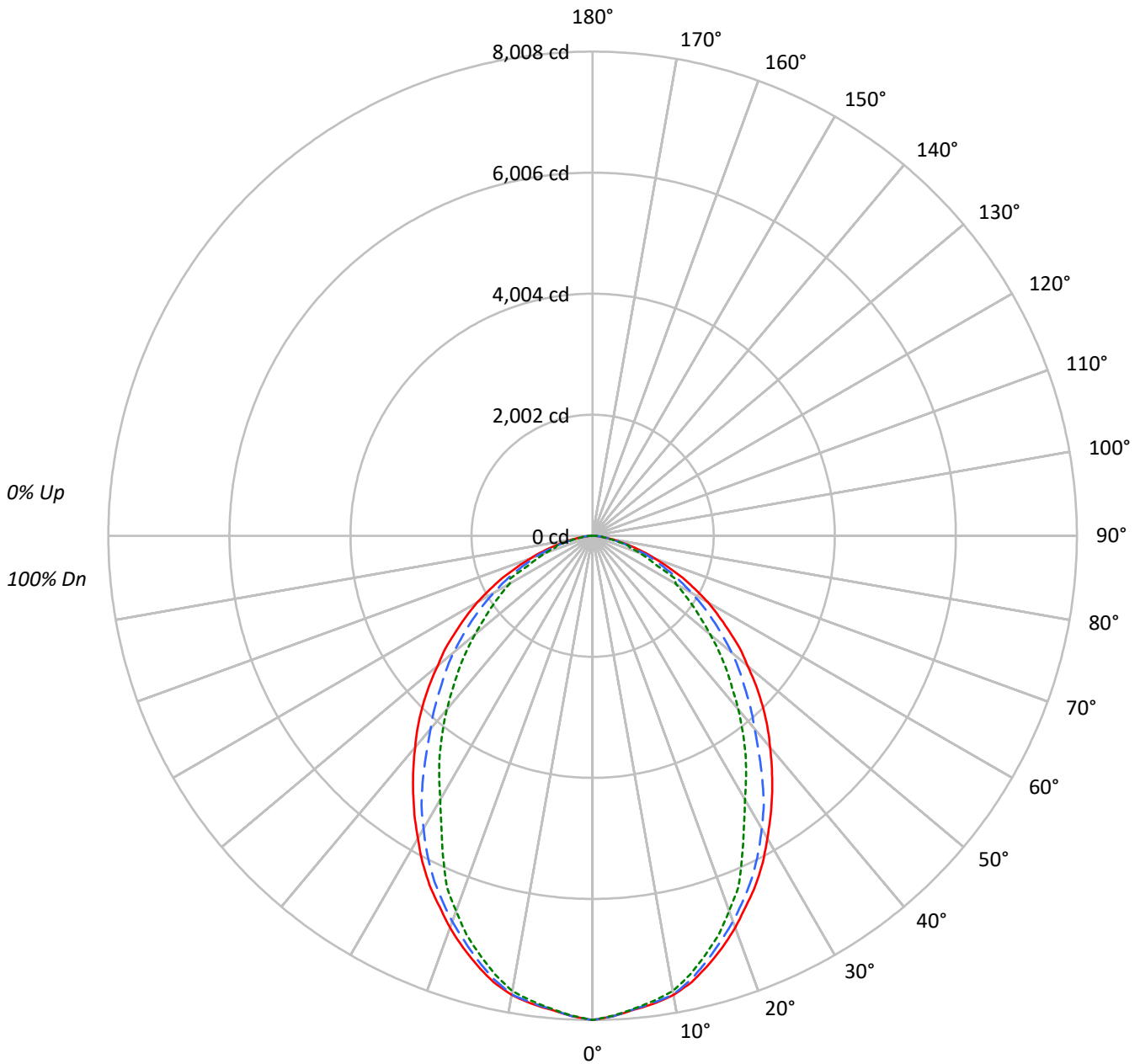
Lumens per Lamp: N/A
Luminaire Lumens: 15721.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	10775	10775	10775
5°	10628	10616	10603
10°	10536	10524	10448
15°	10252	10149	10007
20°	9876	9716	9451
25°	9470	9264	8686
30°	8975	8688	7825
35°	8500	8029	7238
40°	8016	7317	6585
45°	7557	6764	5954
50°	6996	6279	5310
55°	6472	5690	4756
60°	5929	5082	4260
65°	5217	4450	3773
70°	4297	3897	3205
75°	3417	2984	3129
80°	2296	2152	2008
85°	1430	1715	2001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	745.4	4.7
10°-20°	2045.8	13.0
20°-30°	2832.3	18.0
30°-40°	3020.0	19.2
40°-50°	2755.2	17.5
50°-60°	2158.4	13.7
60°-70°	1406.8	8.9
70°-80°	623.3	4.0
80°-90°	133.8	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°	5623.5	35.8
0°-40°	8643.6	55.0
0°-60°	13557.2	86.2
0°-90°	15721.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15721.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8008	8008	8008	8008	8008	
5°	7869	7860	7860	7851	7851	747
15°	7360	7360	7286	7212	7184	2069
25°	6379	6342	6240	6018	5851	2928
35°	5175	5138	4888	4518	4407	3235
45°	3972	3888	3555	3259	3129	3059
55°	2759	2676	2426	2139	2028	2474
65°	1639	1546	1398	1426	1185	1615
75°	657	611	574	546	602	704
85°	93	102	111	120	130	128
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8008.1	8008.1	8008.1	8008.1	8008.1
2.5°	7952.5	7952.5	7952.5	7943.3	7943.3
5°	7869.2	7859.9	7859.9	7850.7	7850.7
7.5°	7804.4	7795.1	7785.9	7776.6	7758.1
10°	7711.8	7711.8	7702.6	7656.3	7647.0
12.5°	7563.7	7554.4	7517.4	7452.6	7434.1
15°	7360.0	7360.0	7286.0	7211.9	7184.1
17.5°	7137.8	7128.6	7036.0	6961.9	6924.9
20°	6897.1	6878.6	6786.0	6665.7	6600.9
22.5°	6628.6	6628.6	6517.5	6360.2	6295.4
25°	6378.7	6341.6	6239.8	6017.6	5851.0
27.5°	6091.7	6036.1	5925.0	5610.3	5415.9
30°	5776.9	5749.1	5591.8	5184.4	5036.3
32.5°	5480.7	5434.4	5267.7	4841.9	4721.5
35°	5175.2	5138.1	4888.2	4517.8	4406.8
37.5°	4869.6	4823.4	4508.6	4212.3	4073.5
40°	4564.1	4508.6	4166.0	3897.6	3749.4
42.5°	4277.1	4203.1	3869.8	3582.8	3416.2
45°	3971.6	3888.3	3555.0	3258.8	3129.2
47.5°	3666.1	3592.1	3286.5	2981.0	2832.9
50°	3342.1	3277.3	2999.6	2694.0	2536.7
52.5°	3073.6	2971.8	2703.3	2397.8	2268.2
55°	2758.8	2675.5	2425.6	2138.6	2027.5
57.5°	2471.9	2388.5	2157.1	1888.6	1796.0
60°	2203.4	2083.0	1888.6	1657.2	1583.1
62.5°	1907.1	1814.5	1647.9	1453.5	1546.1
65°	1638.6	1546.1	1397.9	1425.7	1185.0
67.5°	1342.4	1296.1	1166.5	1036.9	999.9
70°	1092.4	1036.9	990.6	851.7	814.7
72.5°	870.2	814.7	749.9	675.8	648.1
75°	657.3	611.0	574.0	546.2	601.8
77.5°	453.6	435.1	407.3	379.6	370.3
80°	296.3	287.0	277.7	268.5	259.2
82.5°	175.9	175.9	175.9	175.9	175.9
85°	92.6	101.8	111.1	120.4	129.6
87.5°	55.5	55.5	64.8	74.1	83.3
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)