

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: P547052

Luminaire Tested: **FMR-24-4-LD4-3HI-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: P547052
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-LD4-3HI-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

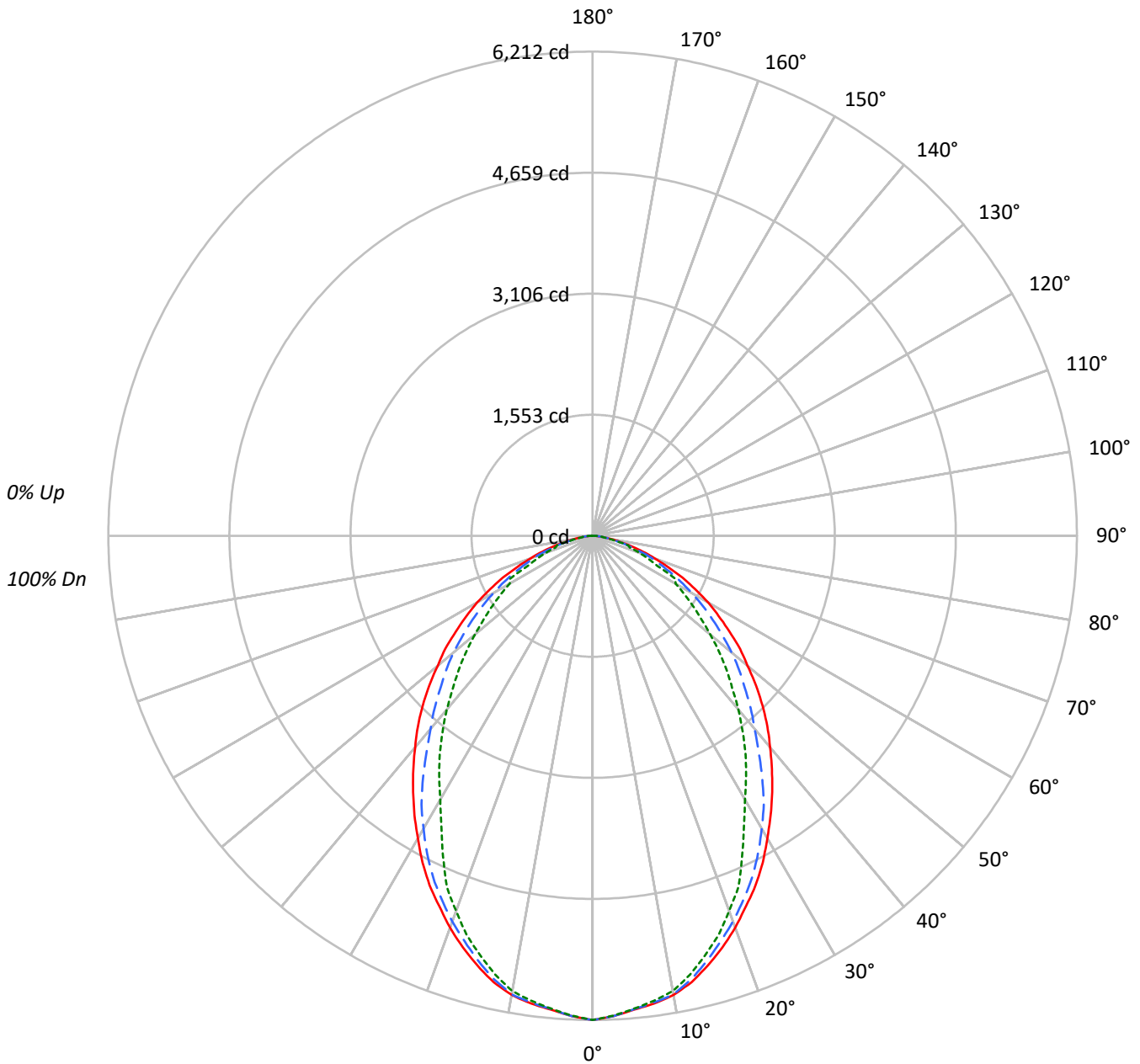
Lumens per Lamp: N/A
Luminaire Lumens: 12195.0 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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					20					
RC	80					70					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°	8358	8358	8358
5°	8245	8235	8225
10°	8173	8163	8104
15°	7953	7873	7763
20°	7661	7537	7332
25°	7346	7186	6738
30°	6962	6739	6070
35°	6594	6228	5615
40°	6219	5676	5109
45°	5862	5247	4619
50°	5427	4870	4119
55°	5020	4414	3689
60°	4599	3942	3305
65°	4047	3452	2926
70°	3334	3023	2486
75°	2651	2315	2427
80°	1781	1669	1558
85°	1108	1331	1551



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	578.3	4.7
10°-20°	1587.0	13.0
20°-30°	2197.0	18.0
30°-40°	2342.7	19.2
40°-50°	2137.2	17.5
50°-60°	1674.3	13.7
60°-70°	1091.2	8.9
70°-80°	483.5	4.0
80°-90°	103.8	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°	4362.3	35.8
0°-40°	6704.9	55.0
0°-60°	10516.5	86.2
0°-90°	12195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6212	6212	6212	6212	6212	
5°	6104	6097	6097	6090	6090	579
15°	5709	5709	5652	5594	5573	1605
25°	4948	4919	4840	4668	4539	2272
35°	4014	3986	3792	3505	3418	2510
45°	3081	3016	2758	2528	2427	2373
55°	2140	2075	1882	1659	1573	1920
65°	1271	1199	1084	1106	919	1253
75°	510	474	445	424	467	546
85°	72	79	86	93	100	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6212.0	6212.0	6212.0	6212.0	6212.0
2.5°	6168.9	6168.9	6168.9	6161.7	6161.7
5°	6104.2	6097.1	6097.1	6089.9	6089.9
7.5°	6054.0	6046.8	6039.6	6032.4	6018.1
10°	5982.2	5982.2	5975.0	5939.1	5931.9
12.5°	5867.3	5860.1	5831.4	5781.1	5766.7
15°	5709.3	5709.3	5651.8	5594.4	5572.8
17.5°	5536.9	5529.7	5457.9	5400.5	5371.7
20°	5350.2	5335.8	5264.0	5170.7	5120.4
22.5°	5141.9	5141.9	5055.8	4933.7	4883.4
25°	4948.0	4919.3	4840.3	4668.0	4538.7
27.5°	4725.4	4682.3	4596.1	4352.0	4201.2
30°	4481.2	4459.7	4337.6	4021.6	3906.7
32.5°	4251.4	4215.5	4086.3	3755.9	3662.5
35°	4014.4	3985.7	3791.8	3504.6	3418.4
37.5°	3777.5	3741.5	3497.4	3267.6	3159.8
40°	3540.5	3497.4	3231.7	3023.4	2908.5
42.5°	3317.8	3260.4	3001.9	2779.2	2650.0
45°	3080.8	3016.2	2757.7	2527.9	2427.3
47.5°	2843.9	2786.4	2549.4	2312.4	2197.5
50°	2592.5	2542.2	2326.8	2089.8	1967.7
52.5°	2384.2	2305.3	2097.0	1860.0	1759.5
55°	2140.1	2075.4	1881.5	1658.9	1572.7
57.5°	1917.5	1852.8	1673.3	1465.0	1393.2
60°	1709.2	1615.8	1465.0	1285.5	1228.0
62.5°	1479.4	1407.6	1278.3	1127.5	1199.3
65°	1271.1	1199.3	1084.4	1105.9	919.2
67.5°	1041.3	1005.4	904.9	804.3	775.6
70°	847.4	804.3	768.4	660.7	632.0
72.5°	675.1	632.0	581.7	524.2	502.7
75°	509.9	474.0	445.3	423.7	466.8
77.5°	351.9	337.5	316.0	294.4	287.3
80°	229.8	222.6	215.4	208.3	201.1
82.5°	136.4	136.4	136.4	136.4	136.4
85°	71.8	79.0	86.2	93.4	100.5
87.5°	43.1	43.1	50.3	57.5	64.6
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)