

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: P589630

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589630
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-4HI-50-UNV-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

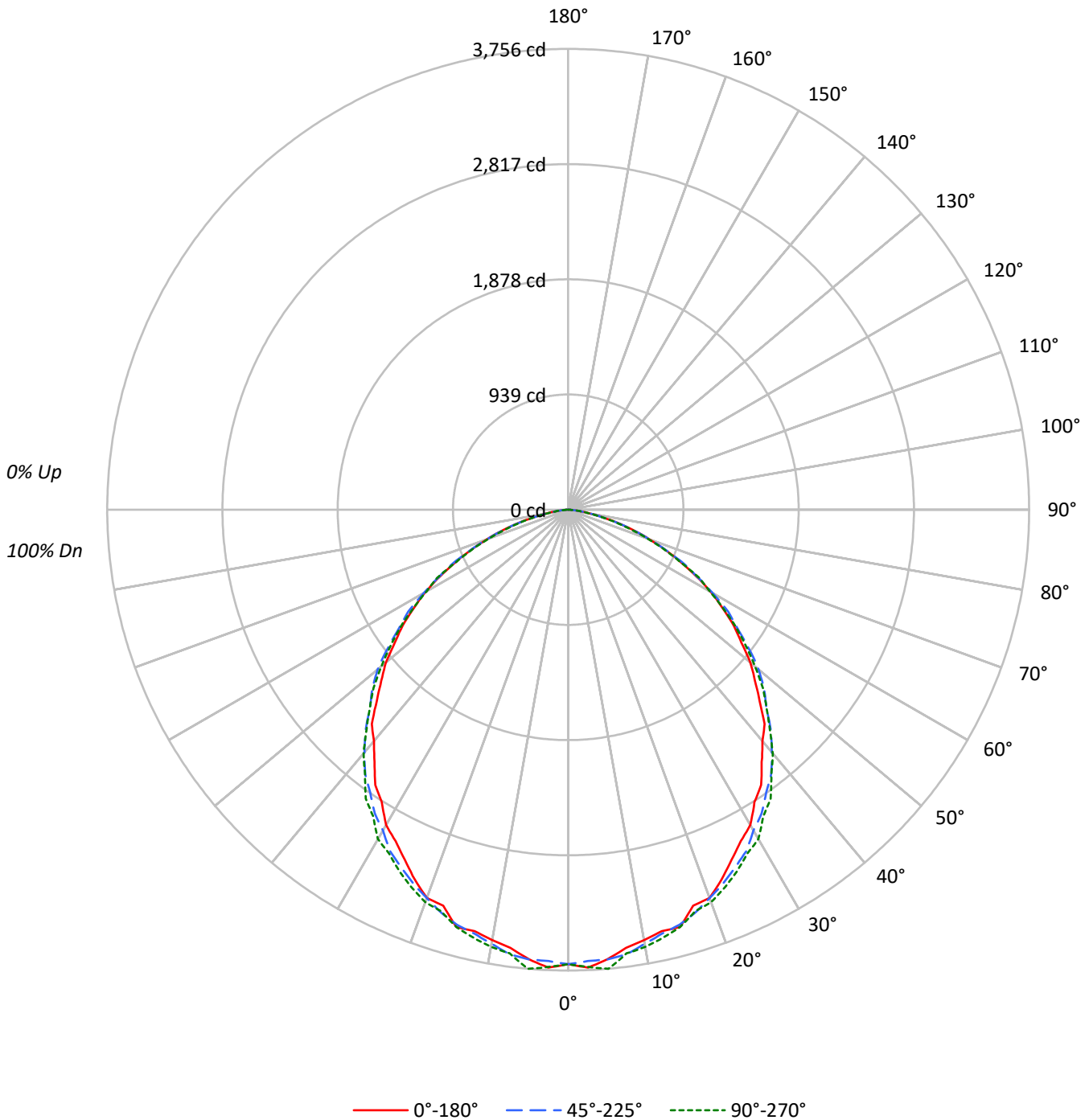
Lumens per Lamp: N/A
Luminaire Lumens: 9335.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9967	9967	9967
5°	9934	9938	10147
10°	9733	9818	9887
15°	9810	9757	9811
20°	9644	9644	9747
25°	9348	9552	9657
30°	9219	9381	9631
35°	9002	9238	9445
40°	8652	9068	9109
45°	8390	8689	8701
50°	8115	8481	8318
55°	7732	7882	7826
60°	7230	7302	7170
65°	6446	6611	6401
70°	5531	5550	5396
75°	4380	4371	4201
80°	2935	2853	2741
85°	1593	1581	1476



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.4	3.7
10°-20°	987.4	10.6
20°-30°	1479.4	15.8
30°-40°	1753.4	18.8
40°-50°	1756.6	18.8
50°-60°	1491.1	16.0
60°-70°	1005.3	10.8
70°-80°	441.7	4.7
80°-90°	71.8	0.8
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°	2815.2	30.2
0°-40°	4568.6	48.9
0°-60°	7816.2	83.7
0°-90°	9335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9335.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3704	3704	3704	3704	3704	
5°	3678	3669	3679	3668	3756	347
15°	3521	3481	3502	3520	3522	981
25°	3148	3165	3217	3259	3252	1455
35°	2740	2748	2812	2877	2875	1701
45°	2205	2246	2283	2342	2286	1705
55°	1648	1637	1680	1668	1668	1466
65°	1012	999	1038	998	1005	1007
75°	421	413	420	391	404	452
85°	52	50	51	50	48	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3703.9	3703.9	3703.9	3703.9	3703.9
2.5°	3735.9	3707.7	3681.4	3712.0	3730.7
5°	3677.6	3669.0	3679.0	3668.0	3756.5
7.5°	3602.0	3635.0	3654.2	3642.2	3647.5
10°	3561.9	3550.4	3592.9	3622.6	3618.3
12.5°	3518.8	3536.0	3538.4	3570.5	3573.3
15°	3521.2	3480.6	3502.1	3520.3	3521.7
17.5°	3384.4	3428.4	3443.3	3484.9	3433.2
20°	3367.7	3335.7	3367.7	3410.3	3403.6
22.5°	3264.9	3229.0	3297.9	3335.7	3333.3
25°	3148.2	3165.4	3217.1	3259.1	3252.4
27.5°	3045.8	3065.9	3139.6	3197.4	3160.1
30°	2966.9	2956.9	3019.1	3070.7	3099.4
32.5°	2825.9	2862.2	2934.9	2986.1	2958.8
35°	2740.3	2748.4	2812.0	2877.0	2875.1
37.5°	2590.6	2628.4	2717.8	2736.0	2719.2
40°	2462.9	2500.7	2581.5	2601.1	2593.0
42.5°	2368.7	2375.4	2444.7	2467.2	2431.3
45°	2204.6	2245.8	2283.1	2341.9	2286.4
47.5°	2065.0	2084.1	2164.5	2180.3	2151.1
50°	1938.3	1945.0	2025.8	2006.2	1987.0
52.5°	1779.0	1807.2	1852.7	1848.8	1826.4
55°	1648.0	1637.0	1680.0	1668.5	1668.1
57.5°	1490.6	1509.8	1545.2	1527.0	1497.8
60°	1343.3	1343.8	1356.7	1336.2	1332.3
62.5°	1179.3	1185.1	1187.9	1162.6	1203.7
65°	1012.4	999.0	1038.2	998.5	1005.2
67.5°	858.9	865.6	861.8	836.9	846.5
70°	703.0	711.6	705.4	677.2	685.8
72.5°	560.5	550.0	556.7	521.3	537.5
75°	421.3	412.7	420.4	390.7	404.1
77.5°	286.9	293.6	288.9	273.1	282.2
80°	189.4	184.1	184.1	175.0	176.9
82.5°	110.5	105.2	103.8	100.9	105.2
85°	51.6	50.2	51.2	49.7	47.8
87.5°	18.7	19.1	19.1	18.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)