

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: P589615

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-93-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589615
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-40-UNV-93-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

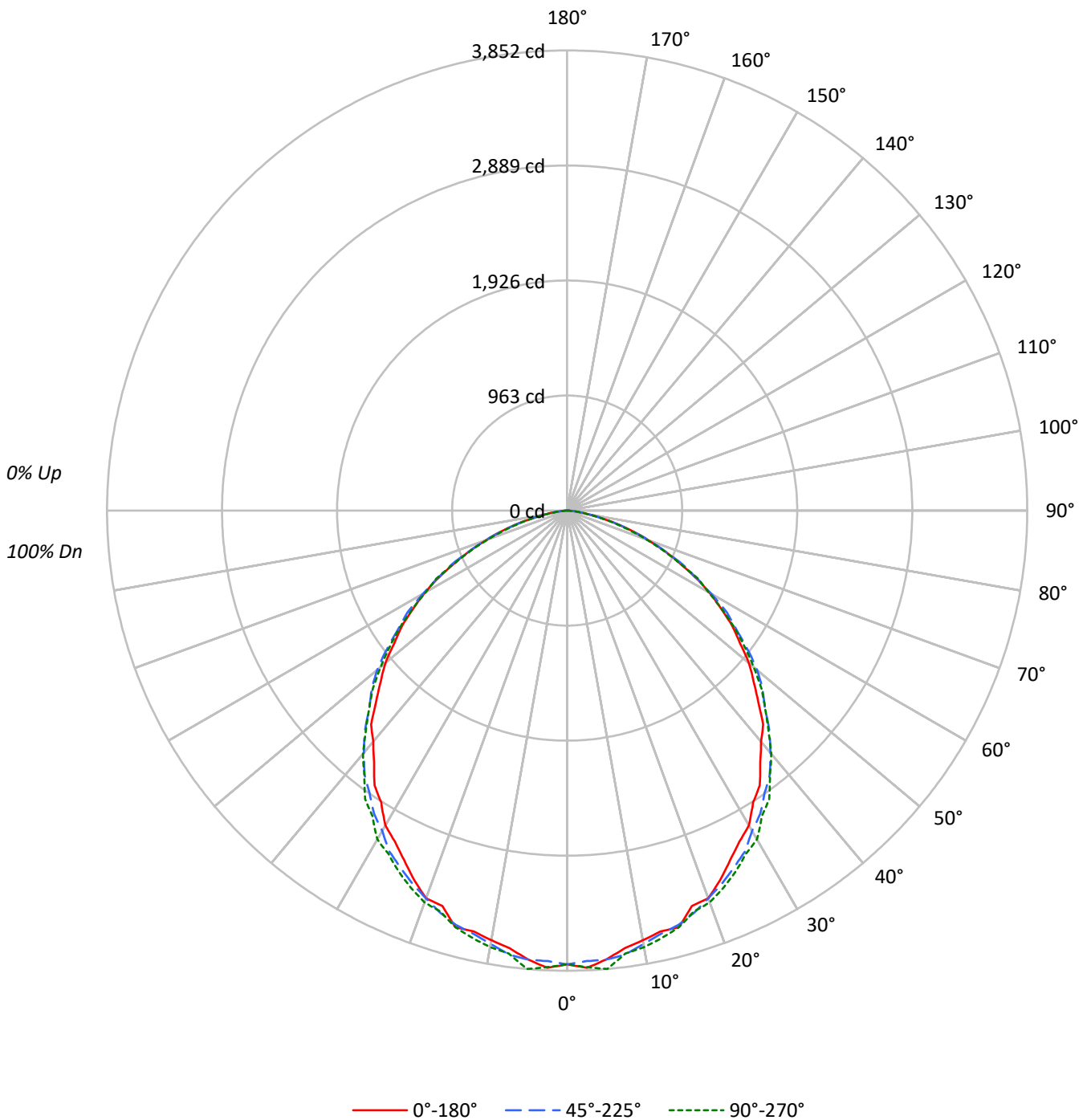
Lumens per Lamp: N/A
Luminaire Lumens: 9572.0 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	10220	10220	10220
5°	10186	10190	10405
10°	9980	10067	10138
15°	10059	10004	10060
20°	9889	9889	9994
25°	9585	9794	9902
30°	9453	9619	9875
35°	9230	9472	9685
40°	8871	9298	9340
45°	8603	8909	8922
50°	8321	8696	8530
55°	7928	8082	8024
60°	7414	7487	7353
65°	6610	6779	6564
70°	5671	5691	5533
75°	4492	4481	4309
80°	3009	2926	2811
85°	1636	1621	1513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.3	3.7
10°-20°	1012.5	10.6
20°-30°	1516.9	15.8
30°-40°	1797.9	18.8
40°-50°	1801.2	18.8
50°-60°	1528.9	16.0
60°-70°	1030.8	10.8
70°-80°	452.9	4.7
80°-90°	73.6	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°	2886.7	30.2
0°-40°	4684.6	48.9
0°-60°	8014.7	83.7
0°-90°	9572.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9572.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3798	3798	3798	3798	3798	
5°	3771	3762	3772	3761	3852	356
15°	3611	3569	3591	3610	3611	1006
25°	3228	3246	3299	3342	3335	1492
35°	2810	2818	2883	2950	2948	1745
45°	2261	2303	2341	2401	2344	1749
55°	1690	1678	1723	1711	1710	1503
65°	1038	1024	1065	1024	1031	1032
75°	432	423	431	401	414	463
85°	53	52	52	51	49	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3797.9	3797.9	3797.9	3797.9	3797.9
2.5°	3830.8	3801.9	3774.9	3806.3	3825.4
5°	3771.0	3762.1	3772.4	3761.1	3851.9
7.5°	3693.5	3727.3	3746.9	3734.7	3740.1
10°	3652.3	3640.5	3684.2	3714.6	3710.2
12.5°	3608.2	3625.8	3628.3	3661.1	3664.1
15°	3610.6	3568.9	3591.0	3609.6	3611.1
17.5°	3470.4	3515.5	3530.7	3573.3	3520.4
20°	3453.2	3420.3	3453.2	3496.8	3490.0
22.5°	3347.8	3311.0	3381.6	3420.3	3417.9
25°	3228.1	3245.8	3298.7	3341.9	3335.0
27.5°	3123.2	3143.8	3219.3	3278.6	3240.4
30°	3042.3	3032.0	3095.7	3148.7	3178.1
32.5°	2897.6	2934.9	3009.4	3061.9	3033.9
35°	2809.8	2818.2	2883.4	2950.1	2948.1
37.5°	2656.3	2695.1	2786.8	2805.4	2788.3
40°	2525.4	2564.2	2647.0	2667.1	2658.8
42.5°	2428.8	2435.7	2506.8	2529.8	2493.0
45°	2260.6	2302.8	2341.0	2401.3	2344.5
47.5°	2117.4	2137.0	2219.4	2235.6	2205.7
50°	1987.5	1994.3	2077.2	2057.1	2037.5
52.5°	1824.2	1853.1	1899.7	1895.8	1872.7
55°	1689.8	1678.5	1722.7	1710.9	1710.4
57.5°	1528.5	1548.1	1584.4	1565.8	1535.8
60°	1377.5	1377.9	1391.2	1370.1	1366.2
62.5°	1209.3	1215.1	1218.1	1192.1	1234.3
65°	1038.1	1024.4	1064.6	1023.9	1030.8
67.5°	880.7	887.6	883.6	858.2	868.0
70°	720.8	729.7	723.3	694.4	703.2
72.5°	574.7	563.9	570.8	534.5	551.2
75°	432.0	423.2	431.0	400.6	414.4
77.5°	294.2	301.1	296.2	280.0	289.3
80°	194.2	188.8	188.8	179.5	181.4
82.5°	113.3	107.9	106.4	103.5	107.9
85°	53.0	51.5	52.5	51.0	49.0
87.5°	19.1	19.6	19.6	18.6	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)