

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: P589581

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-93-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589581
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-35-UNV-93-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

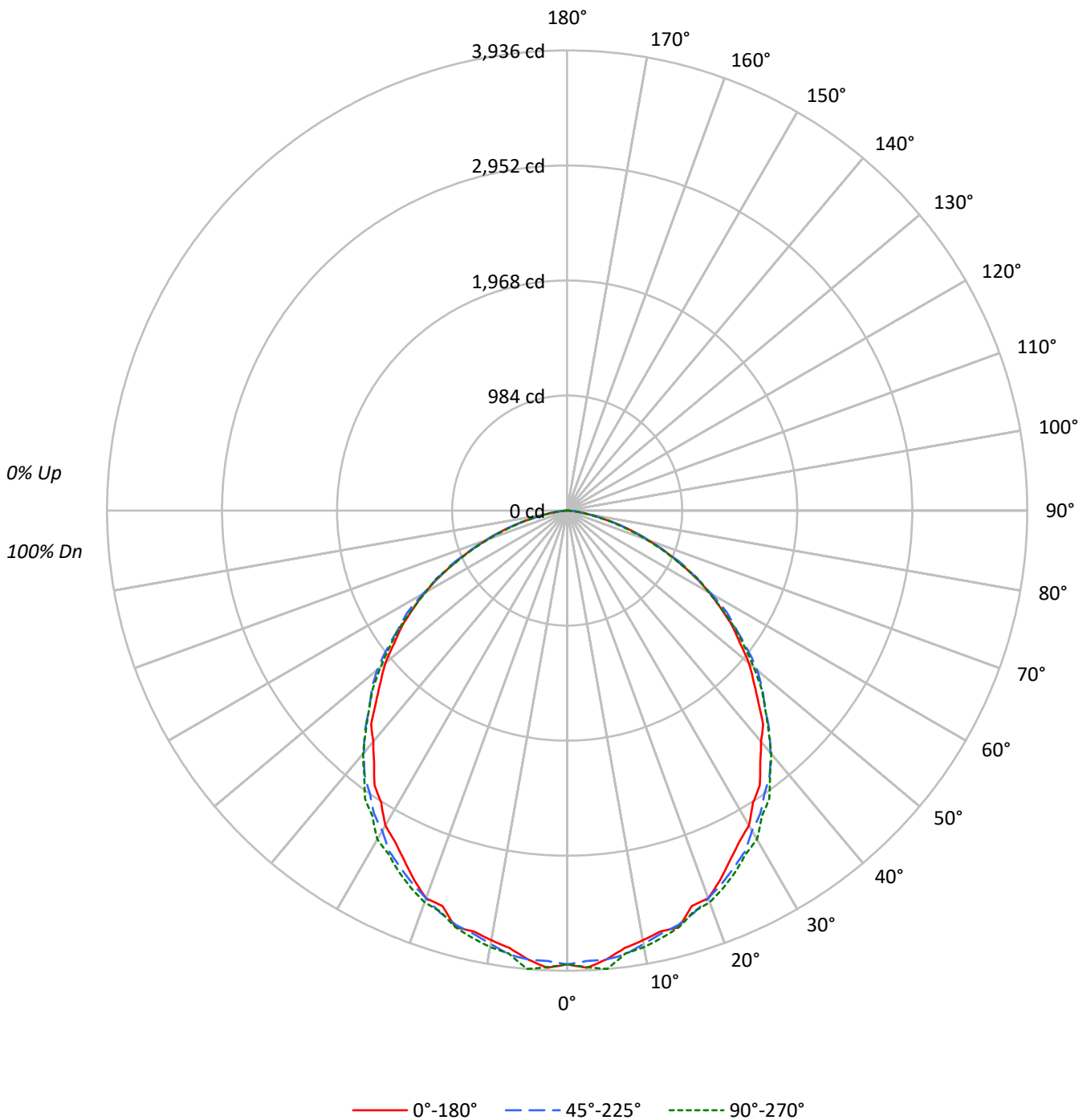
Lumens per Lamp: N/A
Luminaire Lumens: 9780.0 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: FMR-24-2-LD4-4HI-35-UNV-93-84-EDD

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°	10442	10442	10442
5°	10408	10412	10631
10°	10197	10286	10358
15°	10277	10221	10279
20°	10104	10104	10211
25°	9793	10007	10117
30°	9659	9828	10090
35°	9431	9678	9895
40°	9064	9500	9543
45°	8790	9103	9116
50°	8501	8885	8715
55°	8100	8258	8199
60°	7575	7650	7513
65°	6754	6926	6706
70°	5795	5814	5653
75°	4589	4579	4402
80°	3075	2989	2873
85°	1670	1655	1547



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.0	3.7
10°-20°	1034.5	10.6
20°-30°	1549.9	15.8
30°-40°	1836.9	18.8
40°-50°	1840.3	18.8
50°-60°	1562.1	16.0
60°-70°	1053.2	10.8
70°-80°	462.8	4.7
80°-90°	75.2	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°	2949.4	30.2
0°-40°	4786.3	48.9
0°-60°	8188.8	83.7
0°-90°	9780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3880	3880	3880	3880	3880	
5°	3853	3844	3854	3843	3936	363
15°	3689	3646	3669	3688	3690	1028
25°	3298	3316	3370	3414	3408	1525
35°	2871	2879	2946	3014	3012	1783
45°	2310	2353	2392	2454	2395	1787
55°	1726	1715	1760	1748	1748	1536
65°	1061	1047	1088	1046	1053	1055
75°	441	432	440	409	423	473
85°	54	53	54	52	50	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3880.5	3880.5	3880.5	3880.5	3880.5
2.5°	3914.0	3884.5	3856.9	3889.0	3908.5
5°	3852.9	3843.9	3854.4	3842.9	3935.6
7.5°	3773.7	3808.3	3828.4	3815.8	3821.3
10°	3731.7	3719.6	3764.2	3795.3	3790.8
12.5°	3686.6	3704.6	3707.1	3740.7	3743.7
15°	3689.1	3646.5	3669.0	3688.1	3689.6
17.5°	3545.8	3591.9	3607.4	3651.0	3596.9
20°	3528.2	3494.7	3528.2	3572.8	3565.8
22.5°	3420.5	3382.9	3455.1	3494.7	3492.2
25°	3298.3	3316.3	3370.4	3414.5	3407.5
27.5°	3191.0	3212.1	3289.2	3349.9	3310.8
30°	3108.4	3097.9	3163.0	3217.1	3247.2
32.5°	2960.6	2998.6	3074.8	3128.4	3099.9
35°	2870.9	2879.4	2946.0	3014.2	3012.2
37.5°	2714.1	2753.6	2847.3	2866.4	2848.8
40°	2580.3	2619.9	2704.5	2725.1	2716.6
42.5°	2481.6	2488.6	2561.3	2584.8	2547.2
45°	2309.7	2352.8	2391.9	2453.5	2395.4
47.5°	2163.4	2183.5	2267.6	2284.2	2253.6
50°	2030.7	2037.7	2122.4	2101.8	2081.8
52.5°	1863.8	1893.4	1941.0	1937.0	1913.4
55°	1726.5	1715.0	1760.1	1748.1	1747.6
57.5°	1561.7	1581.7	1618.8	1599.8	1569.2
60°	1407.4	1407.9	1421.4	1399.9	1395.9
62.5°	1235.5	1241.5	1244.6	1218.0	1261.1
65°	1060.7	1046.6	1087.7	1046.1	1053.2
67.5°	899.8	906.9	902.9	876.8	886.8
70°	736.5	745.5	739.0	709.5	718.5
72.5°	587.2	576.2	583.2	546.1	563.2
75°	441.4	432.4	440.4	409.3	423.4
77.5°	300.6	307.6	302.6	286.1	295.6
80°	198.4	192.9	192.9	183.4	185.4
82.5°	115.7	110.2	108.7	105.7	110.2
85°	54.1	52.6	53.6	52.1	50.1
87.5°	19.5	20.0	20.0	19.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)