

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: P589619

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-93-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589619
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-93-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

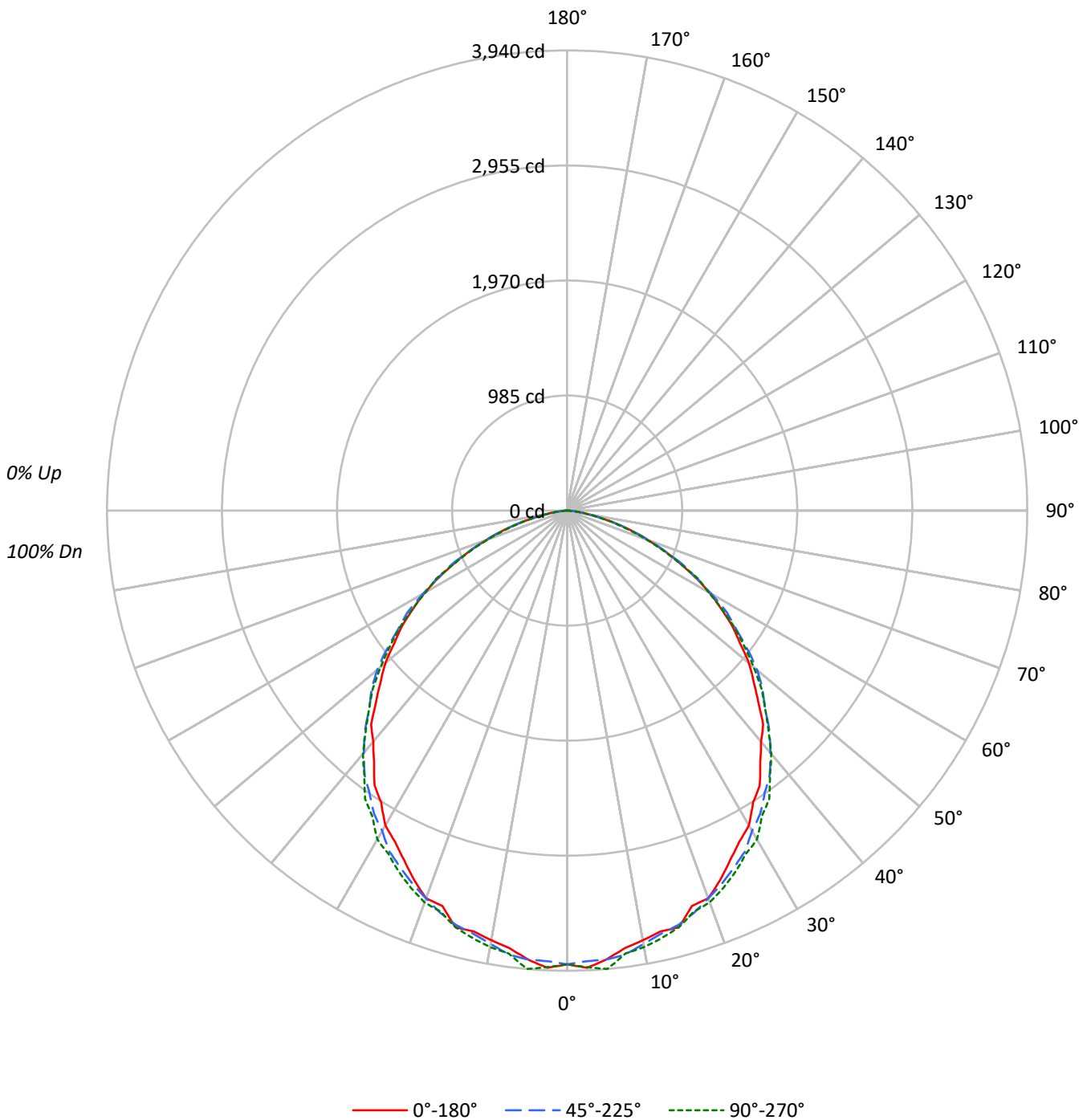
Lumens per Lamp: N/A
Luminaire Lumens: 9791.0 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	10454	10454	10454
5°	10419	10423	10643
10°	10208	10297	10370
15°	10289	10233	10290
20°	10115	10115	10223
25°	9804	10019	10129
30°	9670	9839	10101
35°	9442	9689	9906
40°	9074	9511	9553
45°	8800	9113	9126
50°	8511	8895	8725
55°	8109	8267	8208
60°	7583	7659	7521
65°	6762	6934	6713
70°	5801	5821	5659
75°	4594	4584	4406
80°	3078	2992	2876
85°	1673	1658	1550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.4	3.7
10°-20°	1035.7	10.6
20°-30°	1551.6	15.8
30°-40°	1839.0	18.8
40°-50°	1842.4	18.8
50°-60°	1563.9	16.0
60°-70°	1054.4	10.8
70°-80°	463.3	4.7
80°-90°	75.3	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°	2952.7	30.2
0°-40°	4791.7	48.9
0°-60°	8198.0	83.7
0°-90°	9791.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3885	3885	3885	3885	3885	
5°	3857	3848	3859	3847	3940	364
15°	3693	3651	3673	3692	3694	1029
25°	3302	3320	3374	3418	3411	1527
35°	2874	2883	2949	3018	3016	1784
45°	2312	2356	2395	2456	2398	1789
55°	1728	1717	1762	1750	1750	1538
65°	1062	1048	1089	1047	1054	1056
75°	442	433	441	410	424	474
85°	54	53	54	52	50	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3884.8	3884.8	3884.8	3884.8	3884.8
2.5°	3918.4	3888.8	3861.2	3893.3	3912.9
5°	3857.2	3848.2	3858.7	3847.2	3940.0
7.5°	3778.0	3812.6	3832.7	3820.1	3825.6
10°	3735.8	3723.8	3768.5	3799.6	3795.0
12.5°	3690.7	3708.8	3711.3	3744.9	3747.9
15°	3693.2	3650.6	3673.2	3692.2	3693.7
17.5°	3549.8	3595.9	3611.5	3655.1	3600.9
20°	3532.2	3498.6	3532.2	3576.8	3569.8
22.5°	3424.4	3386.7	3459.0	3498.6	3496.1
25°	3302.0	3320.0	3374.2	3418.3	3411.3
27.5°	3194.6	3215.7	3292.9	3353.6	3314.5
30°	3111.9	3101.3	3166.5	3220.7	3250.8
32.5°	2963.9	3002.0	3078.3	3131.9	3103.3
35°	2874.1	2882.6	2949.4	3017.6	3015.6
37.5°	2717.1	2756.7	2850.5	2869.6	2852.0
40°	2583.2	2622.8	2707.6	2728.2	2719.6
42.5°	2484.4	2491.4	2564.1	2587.7	2550.1
45°	2312.3	2355.5	2394.6	2456.3	2398.1
47.5°	2165.9	2185.9	2270.2	2286.8	2256.2
50°	2032.9	2040.0	2124.7	2104.2	2084.1
52.5°	1865.9	1895.5	1943.2	1939.2	1915.6
55°	1728.5	1716.9	1762.1	1750.1	1749.5
57.5°	1563.5	1583.5	1620.6	1601.6	1571.0
60°	1409.0	1409.5	1423.0	1401.4	1397.4
62.5°	1236.9	1242.9	1246.0	1219.4	1262.5
65°	1061.9	1047.8	1089.0	1047.3	1054.3
67.5°	900.9	907.9	903.9	877.8	887.8
70°	737.3	746.4	739.8	710.3	719.3
72.5°	587.9	576.8	583.9	546.7	563.8
75°	441.9	432.9	440.9	409.8	423.8
77.5°	301.0	308.0	303.0	286.4	295.9
80°	198.6	193.1	193.1	183.6	185.6
82.5°	115.9	110.3	108.8	105.8	110.3
85°	54.2	52.7	53.7	52.2	50.2
87.5°	19.6	20.1	20.1	19.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)