

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: P589570

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-81-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589570
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-81-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

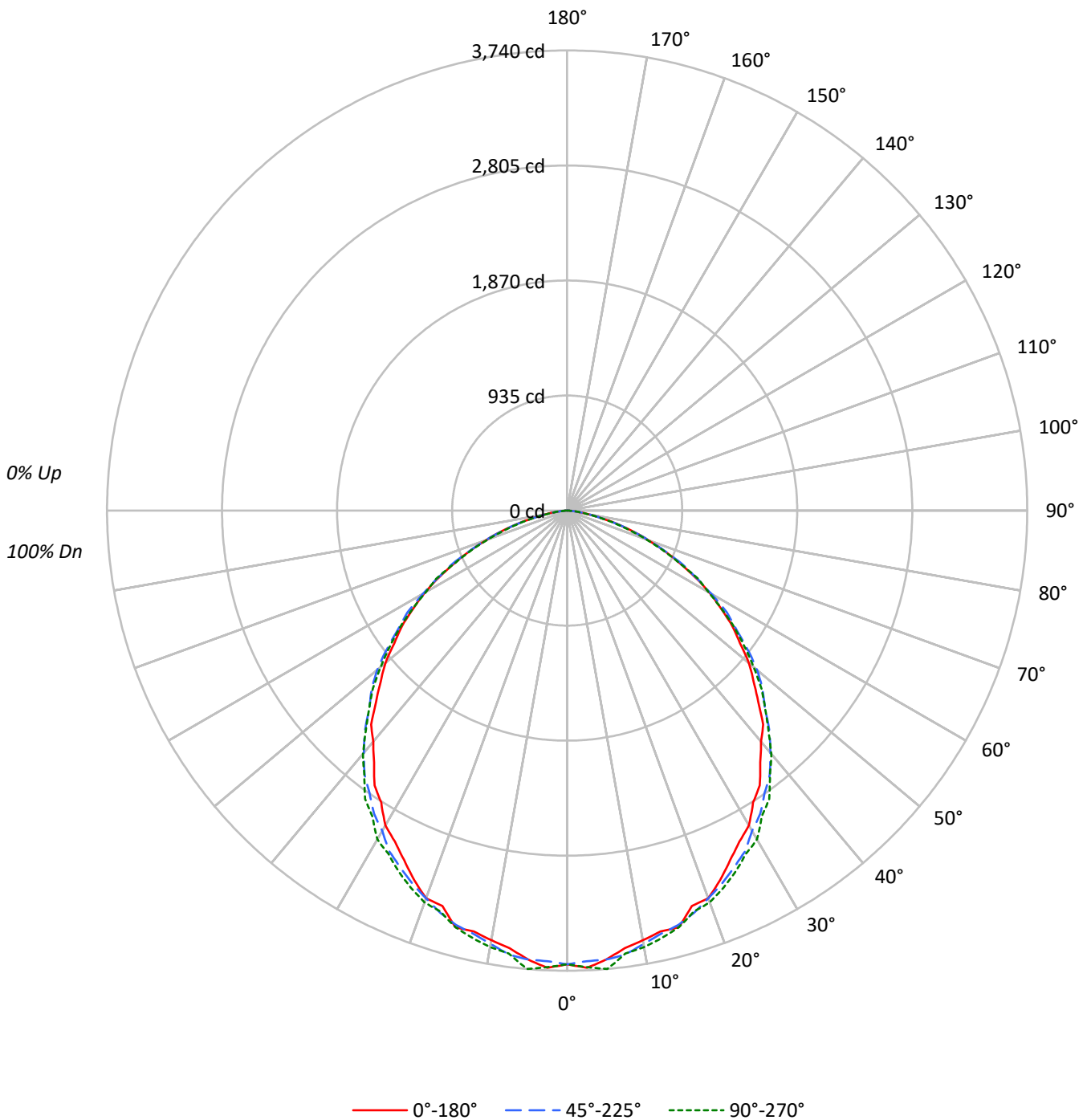
Lumens per Lamp: N/A
Luminaire Lumens: 9294.0 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9923	9923	9923
5°	9890	9894	10103
10°	9690	9775	9844
15°	9767	9714	9768
20°	9602	9602	9704
25°	9307	9510	9615
30°	9179	9340	9588
35°	8962	9197	9404
40°	8614	9028	9069
45°	8353	8650	8663
50°	8079	8444	8282
55°	7697	7847	7791
60°	7198	7270	7139
65°	6418	6582	6372
70°	5507	5526	5372
75°	4362	4351	4183
80°	2921	2841	2731
85°	1587	1572	1470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.9	3.7
10°-20°	983.1	10.6
20°-30°	1472.9	15.8
30°-40°	1745.6	18.8
40°-50°	1748.9	18.8
50°-60°	1484.5	16.0
60°-70°	1000.9	10.8
70°-80°	439.8	4.7
80°-90°	71.5	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°	2802.8	30.2
0°-40°	4548.5	48.9
0°-60°	7781.9	83.7
0°-90°	9294.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9294.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3688	3688	3688	3688	3688	
5°	3661	3653	3663	3652	3740	345
15°	3506	3465	3487	3505	3506	977
25°	3134	3152	3203	3245	3238	1449
35°	2728	2736	2800	2864	2862	1694
45°	2195	2236	2273	2332	2276	1698
55°	1641	1630	1673	1661	1661	1460
65°	1008	995	1034	994	1001	1002
75°	420	411	418	389	402	450
85°	51	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°	3687.6	3687.6	3687.6	3687.6	3687.6
2.5°	3719.5	3691.4	3665.2	3695.7	3714.3
5°	3661.4	3652.9	3662.9	3651.9	3740.0
7.5°	3586.2	3619.1	3638.1	3626.2	3631.4
10°	3546.2	3534.8	3577.2	3606.7	3602.4
12.5°	3503.4	3520.5	3522.9	3554.8	3557.6
15°	3505.7	3465.3	3486.7	3504.8	3506.2
17.5°	3369.6	3413.4	3428.1	3469.6	3418.1
20°	3352.9	3321.0	3352.9	3395.3	3388.6
22.5°	3250.5	3214.8	3283.4	3321.0	3318.6
25°	3134.4	3151.5	3202.9	3244.8	3238.2
27.5°	3032.5	3052.5	3125.8	3183.4	3146.3
30°	2953.9	2943.9	3005.8	3057.2	3085.8
32.5°	2813.5	2849.6	2922.0	2973.0	2945.8
35°	2728.2	2736.3	2799.6	2864.4	2862.5
37.5°	2579.2	2616.8	2705.8	2723.9	2707.3
40°	2452.1	2489.7	2570.1	2589.7	2581.6
42.5°	2358.3	2364.9	2434.0	2456.4	2420.6
45°	2195.0	2235.9	2273.0	2331.6	2276.4
47.5°	2055.9	2075.0	2155.0	2170.7	2141.6
50°	1929.8	1936.4	2016.9	1997.4	1978.3
52.5°	1771.2	1799.3	1844.5	1840.7	1818.3
55°	1640.7	1629.8	1672.6	1661.2	1660.7
57.5°	1484.1	1503.1	1538.4	1520.3	1491.2
60°	1337.4	1337.9	1350.8	1330.3	1326.5
62.5°	1174.1	1179.8	1182.7	1157.5	1198.4
65°	1008.0	994.6	1033.7	994.2	1000.8
67.5°	855.1	861.8	858.0	833.2	842.7
70°	699.9	708.5	702.3	674.2	682.8
72.5°	558.0	547.5	554.2	519.0	535.2
75°	419.5	410.9	418.5	389.0	402.3
77.5°	285.7	292.3	287.6	271.9	280.9
80°	188.5	183.3	183.3	174.3	176.2
82.5°	110.0	104.7	103.3	100.5	104.7
85°	51.4	50.0	50.9	49.5	47.6
87.5°	18.6	19.0	19.0	18.1	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)