

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: P589645

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-93-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589645
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-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

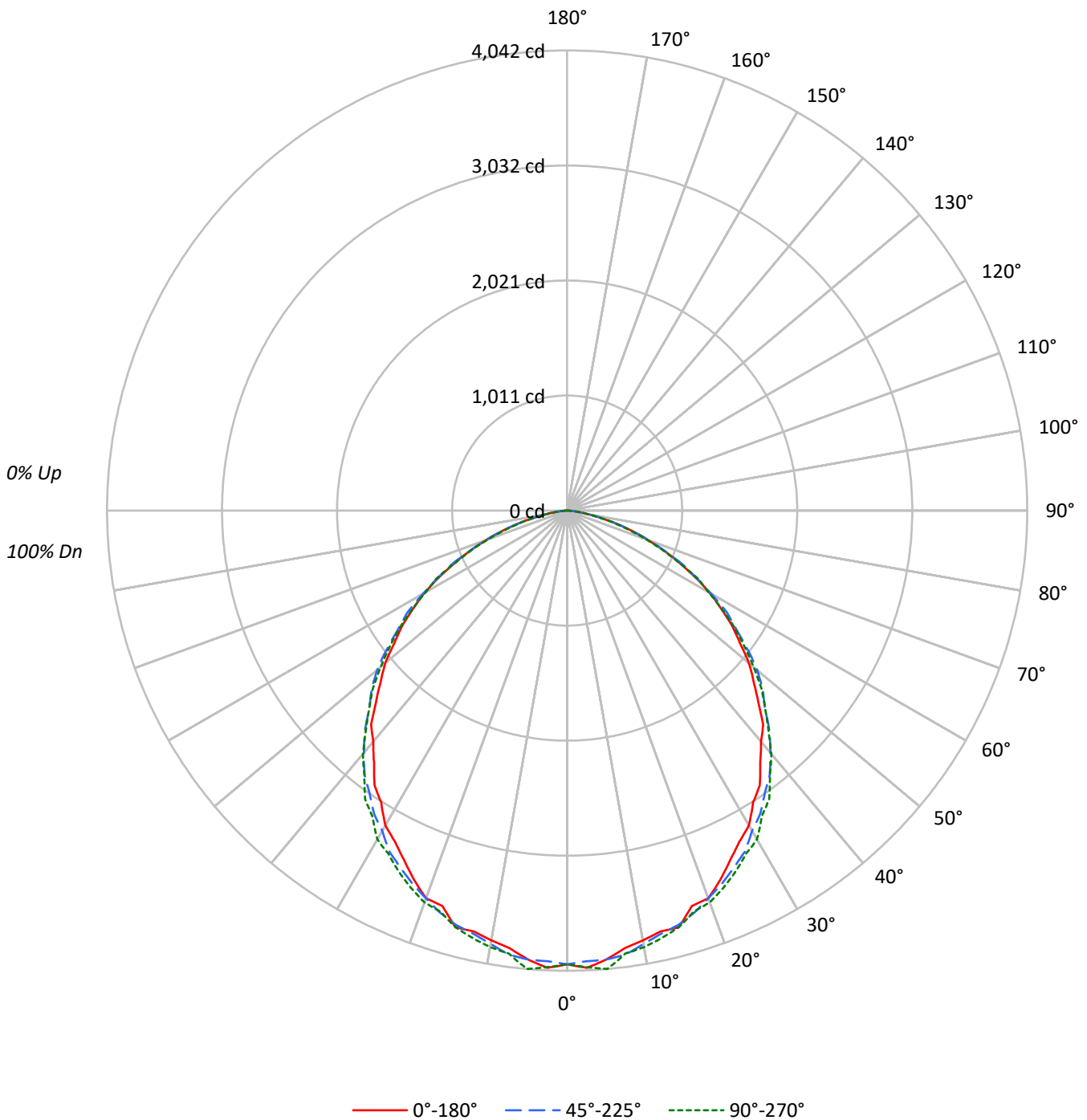
Lumens per Lamp: N/A
Luminaire Lumens: 10045.0 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10725	10725	10725
5°	10690	10694	10919
10°	10473	10564	10639
15°	10556	10498	10557
20°	10377	10377	10488
25°	10058	10278	10391
30°	9920	10095	10363
35°	9687	9940	10163
40°	9310	9758	9801
45°	9028	9349	9363
50°	8732	9126	8951
55°	8320	8481	8421
60°	7780	7857	7716
65°	6937	7114	6888
70°	5952	5972	5806
75°	4714	4703	4521
80°	3158	3070	2951
85°	1717	1701	1590



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.9	3.7
10°-20°	1062.5	10.6
20°-30°	1591.9	15.8
30°-40°	1886.7	18.8
40°-50°	1890.2	18.8
50°-60°	1604.5	16.0
60°-70°	1081.7	10.8
70°-80°	475.3	4.7
80°-90°	77.2	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°	3029.3	30.2
0°-40°	4916.0	48.9
0°-60°	8410.7	83.7
0°-90°	10045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10045.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3986	3986	3986	3986	3986	
5°	3957	3948	3959	3947	4042	373
15°	3789	3745	3768	3788	3790	1056
25°	3388	3406	3462	3507	3500	1566
35°	2949	2957	3026	3096	3094	1831
45°	2372	2417	2457	2520	2460	1835
55°	1773	1762	1808	1796	1795	1577
65°	1089	1075	1117	1074	1082	1083
75°	453	444	452	420	435	486
85°	56	54	55	54	52	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3985.6	3985.6	3985.6	3985.6	3985.6
2.5°	4020.1	3989.7	3961.4	3994.4	4014.4
5°	3957.3	3948.0	3958.8	3947.0	4042.2
7.5°	3876.0	3911.5	3932.1	3919.2	3924.9
10°	3832.8	3820.4	3866.2	3898.1	3893.5
12.5°	3786.5	3805.0	3807.5	3842.0	3845.1
15°	3789.0	3745.3	3768.4	3788.0	3789.5
17.5°	3641.8	3689.2	3705.1	3749.9	3694.3
20°	3623.8	3589.4	3623.8	3669.6	3662.4
22.5°	3513.2	3474.6	3548.7	3589.4	3586.8
25°	3387.6	3406.2	3461.7	3507.0	3499.8
27.5°	3277.5	3299.1	3378.4	3440.6	3400.5
30°	3192.6	3181.8	3248.7	3304.3	3335.1
32.5°	3040.8	3079.9	3158.1	3213.2	3183.9
35°	2948.7	2957.4	3025.9	3095.9	3093.8
37.5°	2787.6	2828.3	2924.5	2944.0	2926.0
40°	2650.2	2690.9	2777.8	2798.9	2790.2
42.5°	2548.8	2556.0	2630.7	2654.8	2616.2
45°	2372.3	2416.6	2456.7	2520.0	2460.3
47.5°	2222.1	2242.6	2329.1	2346.1	2314.7
50°	2085.7	2092.9	2179.9	2158.8	2138.2
52.5°	1914.3	1944.7	1993.6	1989.5	1965.3
55°	1773.3	1761.5	1807.8	1795.5	1794.9
57.5°	1604.0	1624.6	1662.7	1643.1	1611.7
60°	1445.5	1446.0	1459.9	1437.8	1433.7
62.5°	1269.0	1275.2	1278.3	1251.0	1295.3
65°	1089.4	1075.0	1117.2	1074.5	1081.7
67.5°	924.2	931.4	927.3	900.6	910.8
70°	756.5	765.7	759.0	728.7	737.9
72.5°	603.1	591.8	599.0	560.9	578.4
75°	453.4	444.1	452.3	420.4	434.8
77.5°	308.8	316.0	310.8	293.8	303.6
80°	203.8	198.1	198.1	188.3	190.4
82.5°	118.9	113.2	111.7	108.6	113.2
85°	55.6	54.0	55.1	53.5	51.5
87.5°	20.1	20.6	20.6	19.6	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)