

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: P589633

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589633
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-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

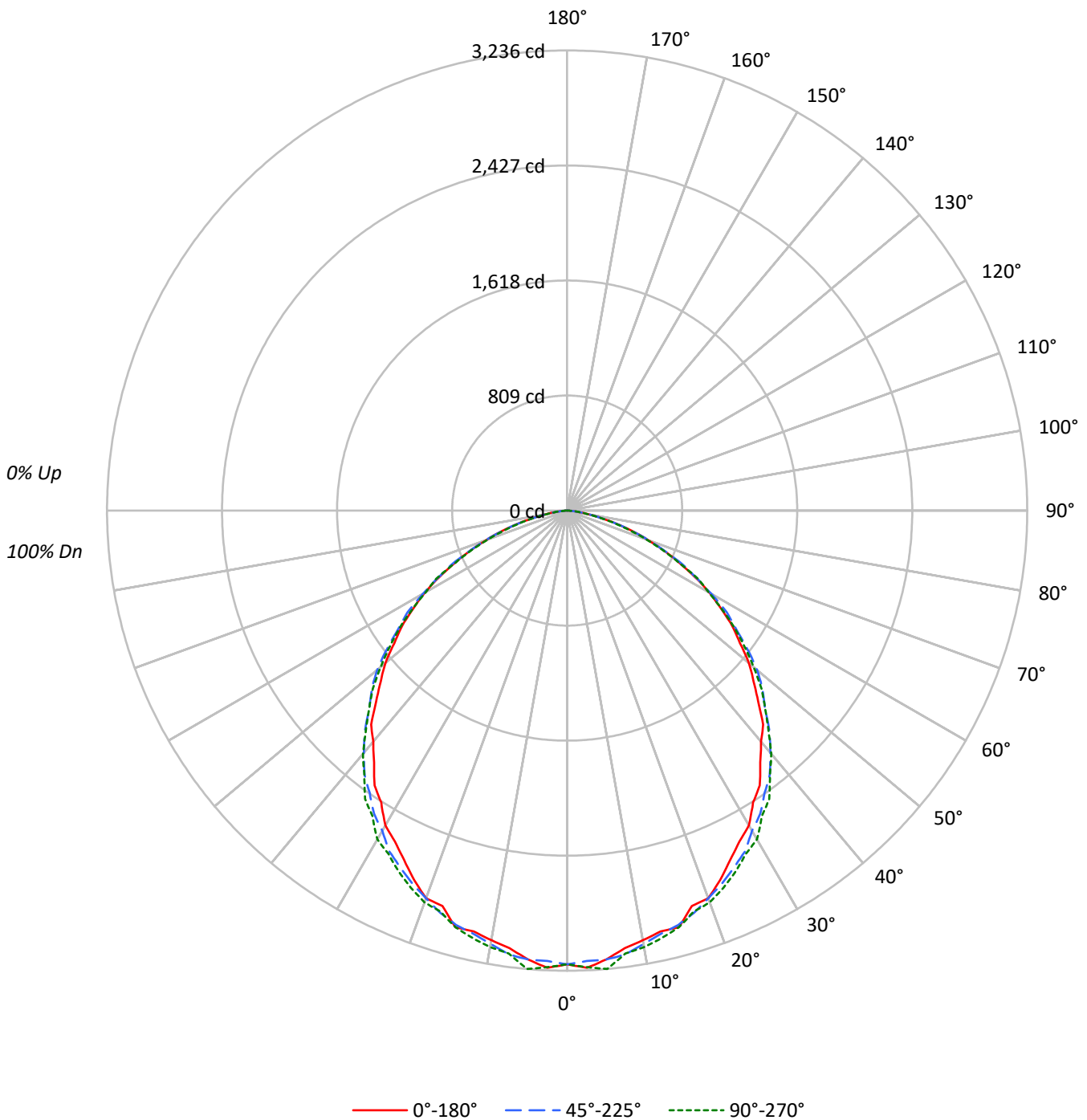
Lumens per Lamp: N/A
Luminaire Lumens: 8041.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	8586	8586	8586
5°	8557	8560	8741
10°	8384	8457	8516
15°	8450	8404	8451
20°	8307	8307	8396
25°	8052	8228	8318
30°	7941	8081	8296
35°	7754	7957	8136
40°	7452	7811	7846
45°	7227	7484	7495
50°	6990	7305	7165
55°	6660	6789	6741
60°	6227	6290	6177
65°	5553	5694	5514
70°	4764	4781	4648
75°	3773	3765	3619
80°	2528	2458	2362
85°	1374	1362	1272



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.1	3.7
10°-20°	850.6	10.6
20°-30°	1274.3	15.8
30°-40°	1510.3	18.8
40°-50°	1513.1	18.8
50°-60°	1284.4	16.0
60°-70°	865.9	10.8
70°-80°	380.5	4.7
80°-90°	61.8	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°	2425.0	30.2
0°-40°	3935.3	48.9
0°-60°	6732.8	83.7
0°-90°	8041.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8041.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3190	3190	3190	3190	3190	
5°	3168	3160	3169	3160	3236	299
15°	3033	2998	3017	3032	3034	845
25°	2712	2727	2771	2807	2802	1254
35°	2360	2367	2422	2478	2477	1466
45°	1899	1934	1967	2017	1970	1469
55°	1420	1410	1447	1437	1437	1263
65°	872	860	894	860	866	867
75°	363	356	362	337	348	389
85°	44	43	44	43	41	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3190.5	3190.5	3190.5	3190.5	3190.5
2.5°	3218.1	3193.8	3171.1	3197.5	3213.5
5°	3167.8	3160.4	3169.0	3159.6	3235.8
7.5°	3102.7	3131.1	3147.6	3137.3	3141.9
10°	3068.1	3058.2	3094.9	3120.4	3116.7
12.5°	3031.0	3045.9	3047.9	3075.5	3078.0
15°	3033.1	2998.1	3016.6	3032.3	3033.5
17.5°	2915.3	2953.2	2966.0	3001.8	2957.3
20°	2900.9	2873.3	2900.9	2937.5	2931.8
22.5°	2812.3	2781.4	2840.7	2873.3	2871.2
25°	2711.8	2726.6	2771.1	2807.4	2801.6
27.5°	2623.6	2640.9	2704.4	2754.2	2722.1
30°	2555.7	2547.0	2600.6	2645.1	2669.8
32.5°	2434.1	2465.5	2528.1	2572.1	2548.7
35°	2360.4	2367.4	2422.2	2478.2	2476.6
37.5°	2231.5	2264.0	2341.0	2356.7	2342.3
40°	2121.5	2154.0	2223.6	2240.5	2233.5
42.5°	2040.3	2046.1	2105.8	2125.2	2094.3
45°	1899.0	1934.5	1966.6	2017.3	1969.5
47.5°	1778.8	1795.2	1864.4	1878.0	1852.9
50°	1669.6	1675.4	1745.0	1728.1	1711.6
52.5°	1532.4	1556.7	1595.9	1592.6	1573.2
55°	1419.5	1410.1	1447.1	1437.3	1436.8
57.5°	1284.0	1300.5	1331.0	1315.3	1290.2
60°	1157.1	1157.5	1168.7	1151.0	1147.7
62.5°	1015.8	1020.8	1023.3	1001.4	1036.8
65°	872.1	860.5	894.3	860.1	865.9
67.5°	739.8	745.6	742.3	720.9	729.1
70°	605.5	613.0	607.6	583.3	590.7
72.5°	482.8	473.7	479.5	449.0	463.0
75°	362.9	355.5	362.1	336.6	348.1
77.5°	247.2	252.9	248.8	235.2	243.0
80°	163.1	158.6	158.6	150.8	152.4
82.5°	95.2	90.6	89.4	86.9	90.6
85°	44.5	43.3	44.1	42.8	41.2
87.5°	16.1	16.5	16.5	15.7	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)