

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: P589800

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-82-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589800
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-LD4-4STD-40-UNV-82-87-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

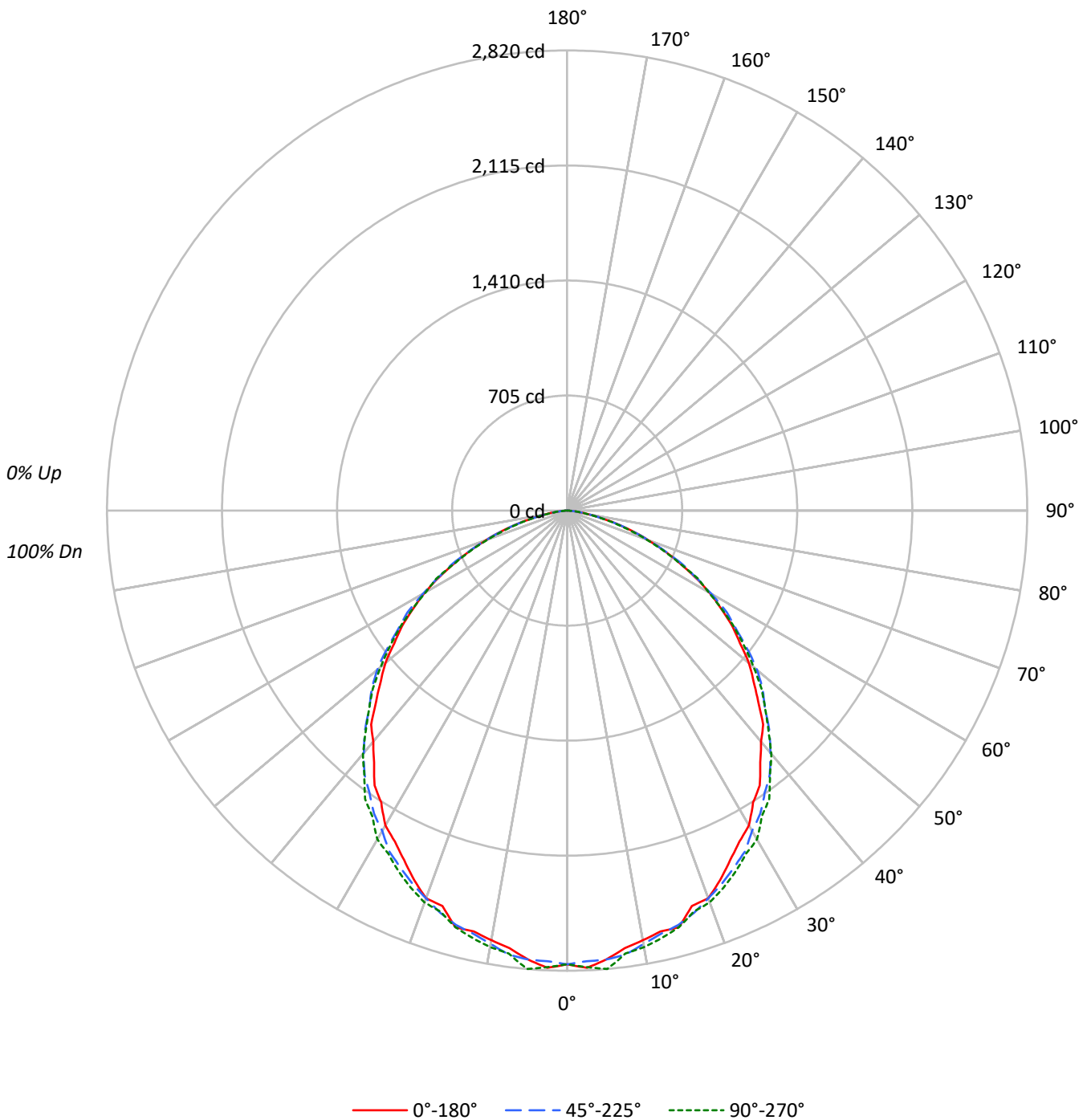
Lumens per Lamp: N/A
Luminaire Lumens: 7008.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	7483	7483	7483
5°	7458	7461	7618
10°	7307	7370	7422
15°	7365	7324	7365
20°	7240	7240	7317
25°	7017	7171	7250
30°	6921	7043	7230
35°	6758	6935	7091
40°	6495	6808	6838
45°	6299	6523	6532
50°	6092	6367	6245
55°	5804	5917	5875
60°	5428	5482	5383
65°	4839	4963	4805
70°	4153	4167	4050
75°	3289	3281	3154
80°	2204	2142	2058
85°	1198	1186	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.6	3.7
10°-20°	741.3	10.6
20°-30°	1110.6	15.8
30°-40°	1316.3	18.8
40°-50°	1318.7	18.8
50°-60°	1119.4	16.0
60°-70°	754.7	10.8
70°-80°	331.6	4.7
80°-90°	53.9	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°	2113.4	30.2
0°-40°	3429.7	48.9
0°-60°	5867.8	83.7
0°-90°	7008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2781	2781	2781	2781	2781	
5°	2761	2754	2762	2754	2820	260
15°	2644	2613	2629	2643	2644	737
25°	2363	2376	2415	2447	2442	1093
35°	2057	2063	2111	2160	2158	1277
45°	1655	1686	1714	1758	1716	1280
55°	1237	1229	1261	1253	1252	1101
65°	760	750	779	750	755	756
75°	316	310	316	293	303	339
85°	39	38	38	37	36	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2780.6	2780.6	2780.6	2780.6	2780.6
2.5°	2804.7	2783.5	2763.7	2786.7	2800.7
5°	2760.9	2754.4	2761.9	2753.7	2820.1
7.5°	2704.1	2728.9	2743.3	2734.3	2738.2
10°	2674.0	2665.4	2697.3	2719.6	2716.3
12.5°	2641.7	2654.6	2656.4	2680.4	2682.6
15°	2643.5	2612.9	2629.1	2642.7	2643.8
17.5°	2540.8	2573.8	2584.9	2616.2	2577.4
20°	2528.2	2504.2	2528.2	2560.2	2555.1
22.5°	2451.0	2424.1	2475.8	2504.2	2502.4
25°	2363.4	2376.3	2415.1	2446.7	2441.7
27.5°	2286.6	2301.7	2357.0	2400.4	2372.4
30°	2227.4	2219.8	2266.5	2305.3	2326.8
32.5°	2121.4	2148.7	2203.3	2241.7	2221.2
35°	2057.2	2063.3	2111.0	2159.9	2158.4
37.5°	1944.8	1973.2	2040.3	2053.9	2041.4
40°	1848.9	1877.3	1938.0	1952.7	1946.6
42.5°	1778.2	1783.2	1835.3	1852.2	1825.2
45°	1655.1	1686.0	1714.0	1758.1	1716.5
47.5°	1550.2	1564.6	1624.9	1636.8	1614.9
50°	1455.1	1460.1	1520.8	1506.1	1491.7
52.5°	1335.5	1356.7	1390.8	1388.0	1371.1
55°	1237.2	1228.9	1261.2	1252.6	1252.3
57.5°	1119.1	1133.4	1160.0	1146.3	1124.4
60°	1008.5	1008.8	1018.5	1003.1	1000.2
62.5°	885.3	889.6	891.8	872.8	903.6
65°	760.0	750.0	779.4	749.6	754.7
67.5°	644.8	649.8	647.0	628.3	635.5
70°	527.8	534.2	529.6	508.4	514.8
72.5°	420.8	412.9	417.9	391.3	403.5
75°	316.3	309.8	315.6	293.3	303.4
77.5°	215.4	220.4	216.8	205.0	211.8
80°	142.2	138.2	138.2	131.4	132.8
82.5°	82.9	79.0	77.9	75.8	79.0
85°	38.8	37.7	38.4	37.3	35.9
87.5°	14.0	14.4	14.4	13.6	12.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)