

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: P589803

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589803
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-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

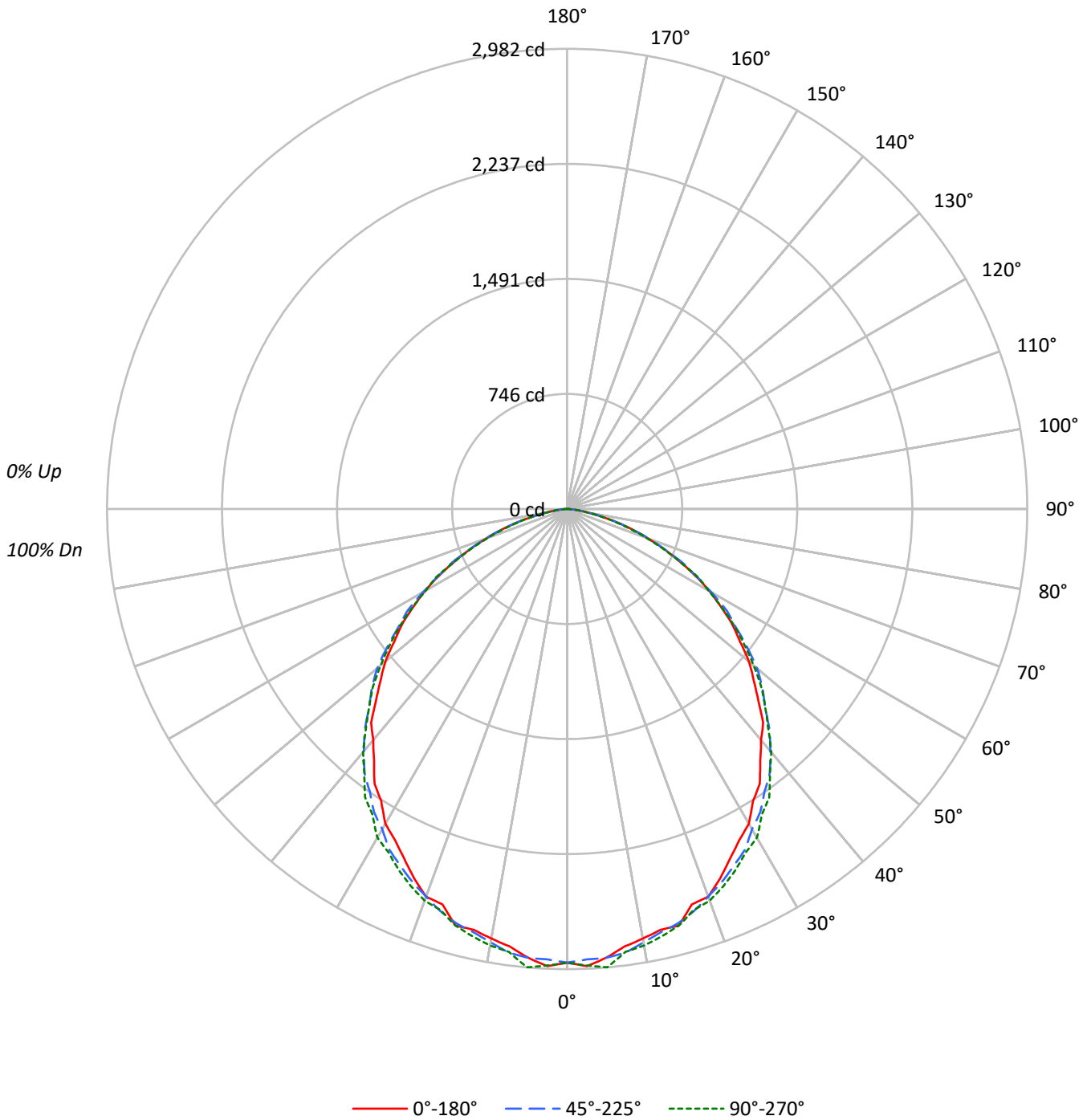
Lumens per Lamp: N/A
Luminaire Lumens: 7409.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	7911	7911	7911
5°	7884	7888	8054
10°	7725	7792	7847
15°	7786	7743	7787
20°	7654	7654	7736
25°	7419	7581	7665
30°	7317	7446	7644
35°	7145	7332	7496
40°	6867	7197	7229
45°	6659	6896	6906
50°	6440	6731	6602
55°	6137	6256	6211
60°	5738	5795	5691
65°	5116	5247	5080
70°	4390	4405	4282
75°	3477	3468	3334
80°	2329	2264	2176
85°	1266	1254	1173



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.5	3.7
10°-20°	783.7	10.6
20°-30°	1174.1	15.8
30°-40°	1391.6	18.8
40°-50°	1394.2	18.8
50°-60°	1183.4	16.0
60°-70°	797.9	10.8
70°-80°	350.6	4.7
80°-90°	57.0	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°	2234.4	30.2
0°-40°	3626.0	48.9
0°-60°	6203.6	83.7
0°-90°	7409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2940	2940	2940	2940	2940	
5°	2919	2912	2920	2911	2982	275
15°	2795	2762	2780	2794	2795	779
25°	2499	2512	2553	2587	2581	1155
35°	2175	2181	2232	2283	2282	1350
45°	1750	1782	1812	1859	1815	1354
55°	1308	1299	1333	1324	1324	1164
65°	804	793	824	792	798	799
75°	334	328	334	310	321	358
85°	41	40	41	40	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2939.7	2939.7	2939.7	2939.7	2939.7
2.5°	2965.1	2942.7	2921.9	2946.2	2961.0
5°	2918.8	2912.0	2920.0	2911.2	2981.5
7.5°	2858.9	2885.0	2900.2	2890.7	2894.9
10°	2827.0	2817.9	2851.6	2875.2	2871.8
12.5°	2792.8	2806.5	2808.4	2833.8	2836.1
15°	2794.7	2762.4	2779.5	2794.0	2795.1
17.5°	2686.2	2721.1	2732.8	2765.9	2724.9
20°	2672.9	2647.4	2672.9	2706.7	2701.3
22.5°	2591.3	2562.8	2617.5	2647.4	2645.5
25°	2498.7	2512.3	2553.3	2586.7	2581.4
27.5°	2417.4	2433.4	2491.8	2537.7	2508.1
30°	2354.8	2346.8	2396.2	2437.2	2459.9
32.5°	2242.8	2271.7	2329.4	2370.0	2348.3
35°	2174.9	2181.3	2231.8	2283.4	2281.9
37.5°	2056.1	2086.1	2157.0	2171.5	2158.2
40°	1954.7	1984.7	2048.9	2064.4	2058.0
42.5°	1880.0	1885.3	1940.3	1958.2	1929.7
45°	1749.8	1782.4	1812.0	1858.7	1814.7
47.5°	1638.9	1654.1	1717.9	1730.4	1707.3
50°	1538.4	1543.7	1607.8	1592.3	1577.1
52.5°	1412.0	1434.4	1470.4	1467.4	1449.5
55°	1308.0	1299.2	1333.4	1324.3	1323.9
57.5°	1183.1	1198.3	1226.4	1211.9	1188.8
60°	1066.2	1066.6	1076.8	1060.5	1057.5
62.5°	936.0	940.6	942.8	922.7	955.4
65°	803.5	792.9	824.0	792.5	797.8
67.5°	681.7	687.0	684.0	664.2	671.8
70°	558.0	564.8	559.9	537.5	544.3
72.5°	444.8	436.5	441.8	413.7	426.6
75°	334.4	327.6	333.6	310.1	320.7
77.5°	227.7	233.1	229.3	216.7	223.9
80°	150.3	146.1	146.1	138.9	140.4
82.5°	87.7	83.5	82.4	80.1	83.5
85°	41.0	39.9	40.6	39.5	38.0
87.5°	14.8	15.2	15.2	14.4	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)