

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: P589791

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589791
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-81-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

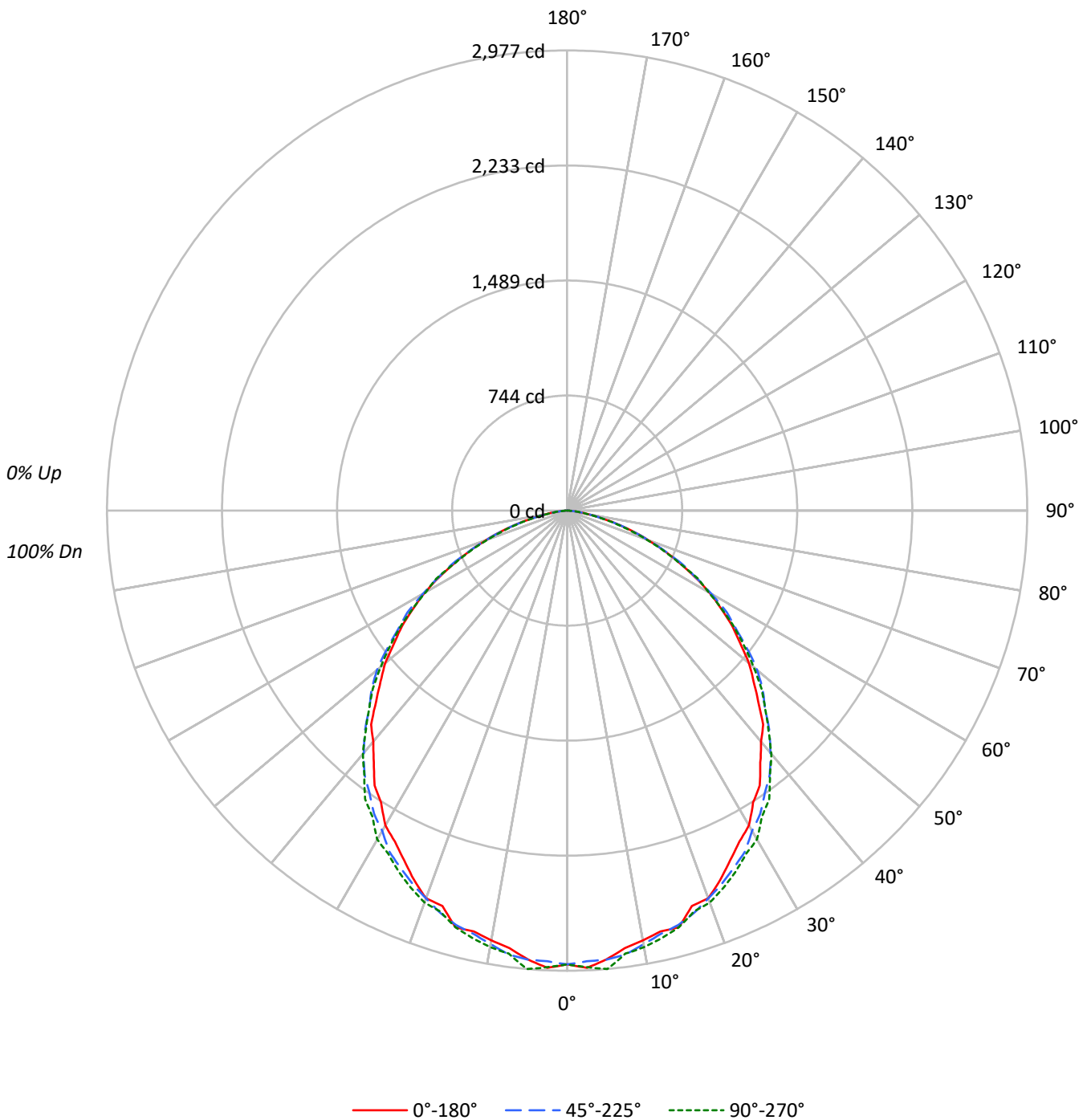
Lumens per Lamp: N/A
Luminaire Lumens: 7399.0 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	7900	7900	7900
5°	7874	7877	8043
10°	7714	7782	7837
15°	7775	7733	7776
20°	7644	7644	7725
25°	7409	7571	7654
30°	7307	7435	7633
35°	7135	7322	7486
40°	6857	7188	7220
45°	6650	6887	6897
50°	6432	6722	6593
55°	6128	6247	6203
60°	5730	5788	5683
65°	5109	5240	5074
70°	4384	4399	4277
75°	3472	3464	3330
80°	2326	2261	2173
85°	1263	1254	1170



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.1	3.7
10°-20°	782.6	10.6
20°-30°	1172.6	15.8
30°-40°	1389.7	18.8
40°-50°	1392.3	18.8
50°-60°	1181.8	16.0
60°-70°	796.8	10.8
70°-80°	350.1	4.7
80°-90°	56.9	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°	2231.4	30.2
0°-40°	3621.1	48.9
0°-60°	6195.2	83.7
0°-90°	7399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7399.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2936	2936	2936	2936	2936	
5°	2915	2908	2916	2907	2977	275
15°	2791	2759	2776	2790	2791	778
25°	2495	2509	2550	2583	2578	1154
35°	2172	2178	2229	2280	2279	1349
45°	1747	1780	1810	1856	1812	1352
55°	1306	1298	1332	1322	1322	1162
65°	802	792	823	792	797	798
75°	334	327	333	310	320	358
85°	41	40	41	39	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2935.7	2935.7	2935.7	2935.7	2935.7
2.5°	2961.1	2938.8	2917.9	2942.2	2957.0
5°	2914.9	2908.1	2916.0	2907.3	2977.4
7.5°	2855.0	2881.2	2896.3	2886.8	2891.0
10°	2823.2	2814.1	2847.8	2871.3	2867.9
12.5°	2789.0	2802.7	2804.6	2830.0	2832.3
15°	2790.9	2758.7	2775.8	2790.2	2791.3
17.5°	2682.5	2717.4	2729.2	2762.1	2721.2
20°	2669.3	2643.9	2669.3	2703.0	2697.7
22.5°	2587.8	2559.3	2613.9	2643.9	2642.0
25°	2495.3	2508.9	2549.9	2583.2	2577.9
27.5°	2414.2	2430.1	2488.5	2534.3	2504.8
30°	2351.6	2343.7	2392.9	2433.9	2456.6
32.5°	2239.8	2268.6	2326.2	2366.8	2345.2
35°	2172.0	2178.4	2228.8	2280.4	2278.8
37.5°	2053.3	2083.3	2154.1	2168.5	2155.3
40°	1952.1	1982.0	2046.1	2061.6	2055.2
42.5°	1877.4	1882.7	1937.7	1955.5	1927.1
45°	1747.4	1780.0	1809.6	1856.2	1812.2
47.5°	1636.7	1651.9	1715.6	1728.1	1705.0
50°	1536.3	1541.6	1605.7	1590.1	1574.9
52.5°	1410.1	1432.4	1468.4	1465.4	1447.6
55°	1306.2	1297.5	1331.6	1322.5	1322.1
57.5°	1181.5	1196.7	1224.7	1210.3	1187.2
60°	1064.7	1065.1	1075.4	1059.1	1056.0
62.5°	934.7	939.3	941.6	921.5	954.1
65°	802.4	791.8	822.9	791.5	796.8
67.5°	680.8	686.1	683.0	663.3	670.9
70°	557.2	564.0	559.1	536.7	543.6
72.5°	444.2	435.9	441.2	413.2	426.1
75°	333.9	327.1	333.2	309.7	320.3
77.5°	227.4	232.7	228.9	216.4	223.6
80°	150.1	145.9	145.9	138.7	140.2
82.5°	87.6	83.4	82.3	80.0	83.4
85°	40.9	39.8	40.6	39.4	37.9
87.5°	14.8	15.2	15.2	14.4	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)