

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: P589767

Luminaire Tested: **FMR-24-2-LD4-4STD-35-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589767
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-35-UNV-82-86-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

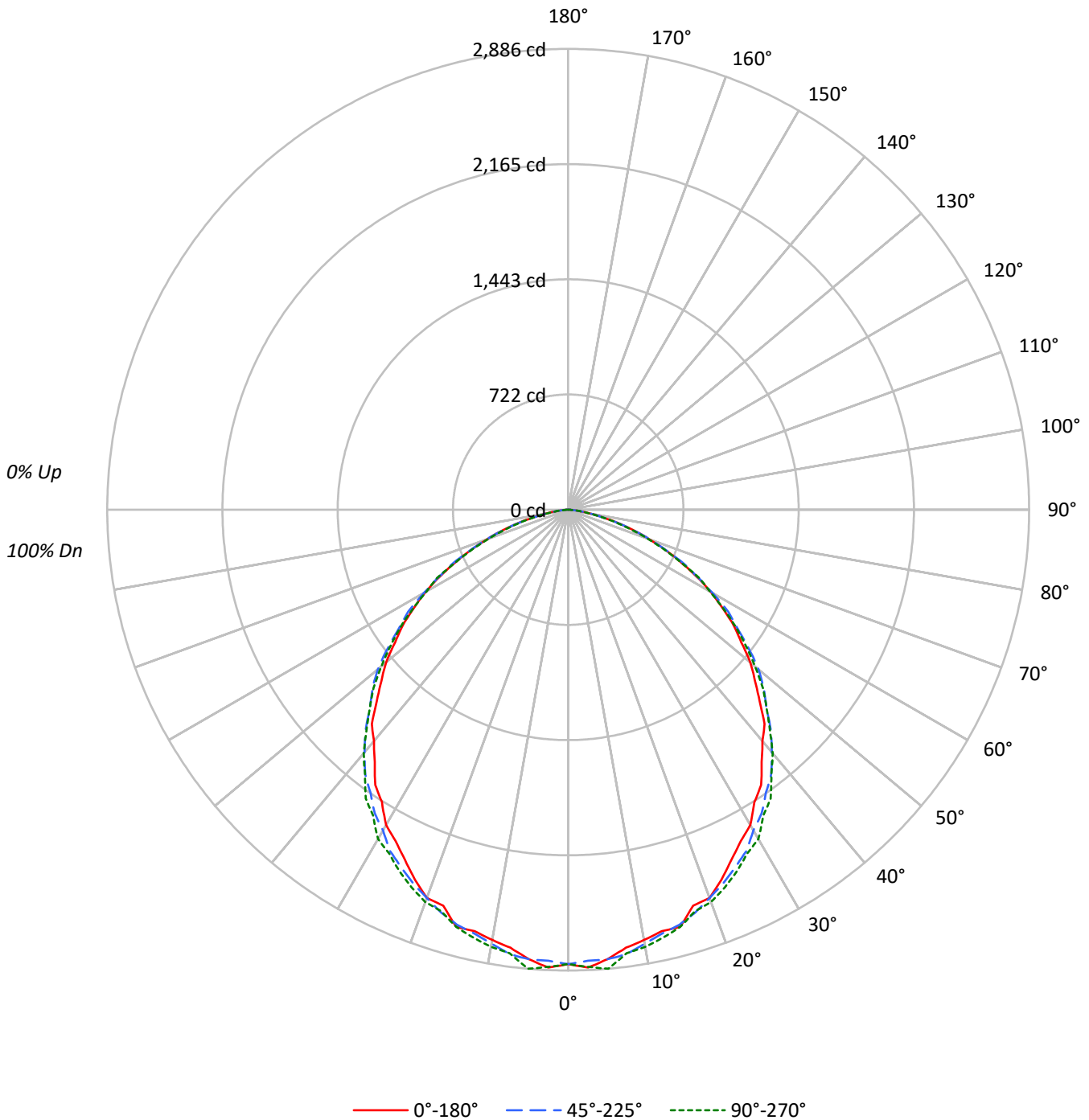
Lumens per Lamp: N/A
Luminaire Lumens: 7171.0 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	7657	7657	7657
5°	7631	7634	7795
10°	7477	7542	7595
15°	7536	7495	7537
20°	7408	7408	7487
25°	7181	7338	7418
30°	7082	7206	7398
35°	6915	7096	7255
40°	6646	6966	6997
45°	6445	6674	6684
50°	6233	6515	6390
55°	5940	6055	6012
60°	5554	5609	5508
65°	4952	5079	4917
70°	4249	4264	4145
75°	3366	3357	3227
80°	2255	2191	2106
85°	1226	1213	1133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.6	3.7
10°-20°	758.5	10.6
20°-30°	1136.4	15.8
30°-40°	1346.9	18.8
40°-50°	1349.4	18.8
50°-60°	1145.4	16.0
60°-70°	772.2	10.8
70°-80°	339.3	4.7
80°-90°	55.1	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°	2162.6	30.2
0°-40°	3509.5	48.9
0°-60°	6004.3	83.7
0°-90°	7171.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7171.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2845	2845	2845	2845	2845	
5°	2825	2818	2826	2818	2886	266
15°	2705	2674	2690	2704	2705	754
25°	2418	2432	2471	2504	2498	1118
35°	2105	2111	2160	2210	2209	1307
45°	1694	1725	1754	1799	1756	1310
55°	1266	1258	1291	1282	1281	1126
65°	778	767	798	767	772	773
75°	324	317	323	300	310	347
85°	40	39	39	38	37	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2845.3	2845.3	2845.3	2845.3	2845.3
2.5°	2869.9	2848.2	2828.0	2851.5	2865.8
5°	2825.1	2818.5	2826.2	2817.7	2885.7
7.5°	2767.0	2792.4	2807.1	2797.9	2801.9
10°	2736.2	2727.3	2760.0	2782.8	2779.5
12.5°	2703.1	2716.3	2718.2	2742.8	2745.0
15°	2704.9	2673.7	2690.2	2704.2	2705.3
17.5°	2599.9	2633.7	2645.1	2677.0	2637.3
20°	2587.0	2562.4	2587.0	2619.7	2614.6
22.5°	2508.0	2480.5	2533.4	2562.4	2560.6
25°	2418.4	2431.6	2471.3	2503.6	2498.5
27.5°	2339.8	2355.2	2411.8	2456.2	2427.6
30°	2279.2	2271.4	2319.2	2358.9	2380.9
32.5°	2170.8	2198.7	2254.5	2293.9	2272.9
35°	2105.0	2111.3	2160.1	2210.1	2208.6
37.5°	1990.0	2019.1	2087.8	2101.7	2088.9
40°	1891.9	1921.0	1983.1	1998.1	1991.9
42.5°	1819.6	1824.7	1878.0	1895.3	1867.7
45°	1693.6	1725.2	1753.8	1799.0	1756.4
47.5°	1586.3	1601.0	1662.7	1674.8	1652.4
50°	1488.9	1494.1	1556.2	1541.1	1526.4
52.5°	1366.6	1388.3	1423.2	1420.2	1403.0
55°	1266.0	1257.5	1290.6	1281.7	1281.4
57.5°	1145.1	1159.8	1187.0	1173.0	1150.6
60°	1031.9	1032.3	1042.2	1026.4	1023.5
62.5°	905.9	910.3	912.5	893.1	924.7
65°	777.7	767.4	797.6	767.1	772.2
67.5°	659.8	664.9	662.0	642.9	650.2
70°	540.0	546.6	541.9	520.2	526.8
72.5°	430.6	422.5	427.6	400.4	412.9
75°	323.7	317.0	322.9	300.1	310.4
77.5°	220.4	225.6	221.9	209.8	216.7
80°	145.5	141.4	141.4	134.5	135.9
82.5°	84.9	80.8	79.7	77.5	80.8
85°	39.7	38.6	39.3	38.2	36.7
87.5°	14.3	14.7	14.7	14.0	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)