

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: P589355

Luminaire Tested: **FMR-24-2-LD4-3HI-50-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589355
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-LD4-3HI-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

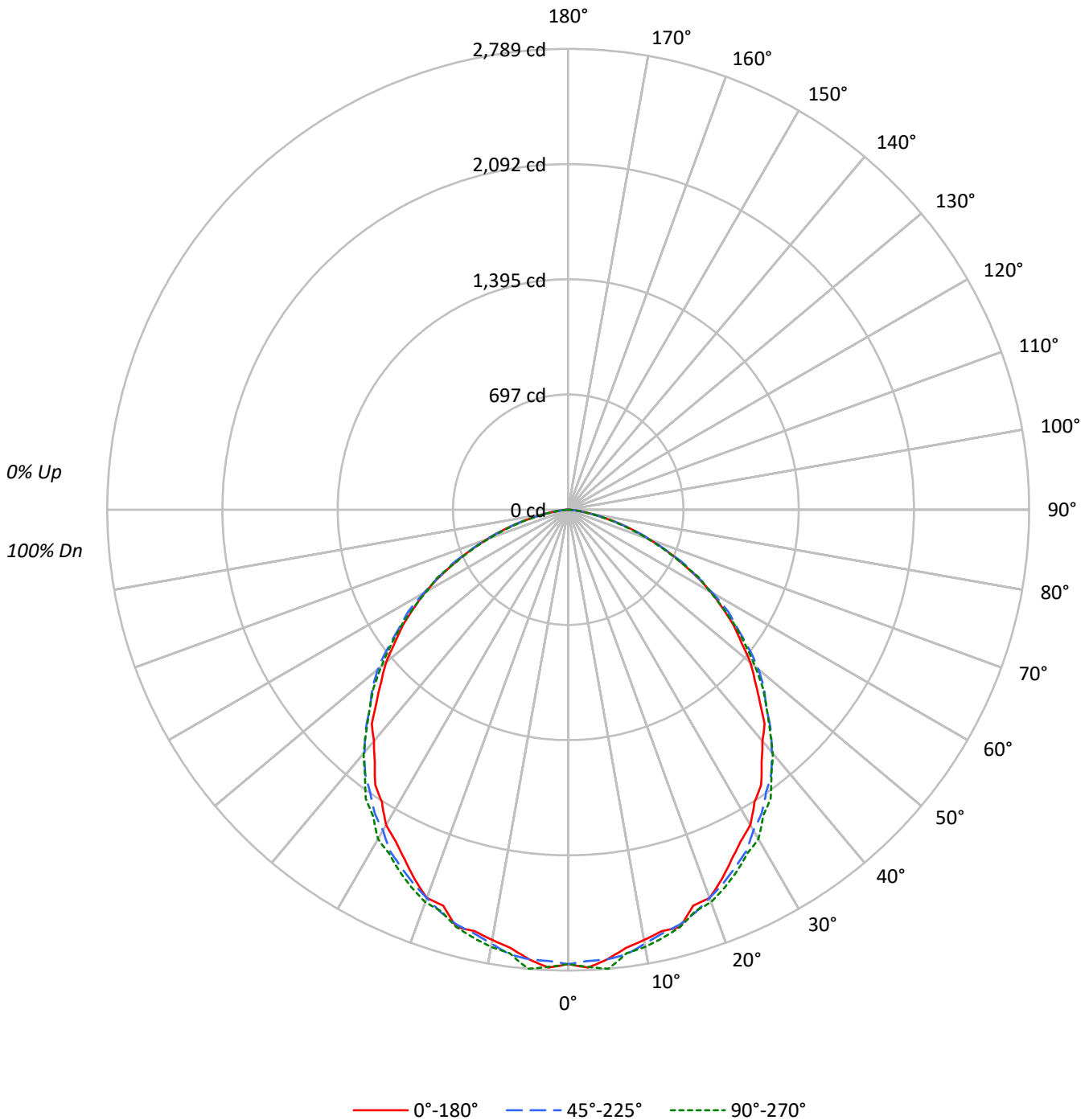
Lumens per Lamp: N/A
Luminaire Lumens: 6931.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 64.8
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°	7400	7400	7400
5°	7376	7379	7534
10°	7226	7289	7341
15°	7283	7244	7285
20°	7160	7160	7237
25°	6940	7092	7170
30°	6845	6965	7150
35°	6684	6859	7013
40°	6424	6733	6763
45°	6229	6451	6460
50°	6025	6297	6176
55°	5741	5852	5811
60°	5368	5421	5324
65°	4786	4909	4753
70°	4107	4120	4006
75°	3252	3245	3119
80°	2179	2118	2036
85°	1183	1173	1096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.7	3.7
10°-20°	733.1	10.6
20°-30°	1098.4	15.8
30°-40°	1301.8	18.8
40°-50°	1304.2	18.8
50°-60°	1107.1	16.0
60°-70°	746.4	10.8
70°-80°	328.0	4.7
80°-90°	53.3	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°	2090.2	30.2
0°-40°	3392.0	48.9
0°-60°	5803.3	83.7
0°-90°	6931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2750	2750	2750	2750	2750	
5°	2730	2724	2732	2723	2789	257
15°	2614	2584	2600	2614	2615	728
25°	2338	2350	2389	2420	2415	1081
35°	2035	2041	2088	2136	2135	1263
45°	1637	1667	1695	1739	1698	1266
55°	1224	1215	1247	1239	1238	1088
65°	752	742	771	741	746	748
75°	313	306	312	290	300	335
85°	38	37	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°	2750.0	2750.0	2750.0	2750.0	2750.0
2.5°	2773.8	2752.9	2733.4	2756.1	2769.9
5°	2730.5	2724.1	2731.6	2723.4	2789.1
7.5°	2674.4	2698.9	2713.1	2704.2	2708.1
10°	2644.6	2636.1	2667.7	2689.7	2686.5
12.5°	2612.6	2625.4	2627.2	2651.0	2653.1
15°	2614.4	2584.2	2600.2	2613.7	2614.8
17.5°	2512.9	2545.5	2556.5	2587.4	2549.1
20°	2500.4	2476.6	2500.4	2532.0	2527.1
22.5°	2424.1	2397.5	2448.6	2476.6	2474.9
25°	2337.5	2350.2	2388.6	2419.8	2414.9
27.5°	2261.5	2276.4	2331.1	2374.0	2346.3
30°	2202.9	2195.4	2241.6	2279.9	2301.2
32.5°	2098.1	2125.1	2179.1	2217.1	2196.8
35°	2034.6	2040.6	2087.8	2136.1	2134.7
37.5°	1923.4	1951.5	2017.9	2031.4	2018.9
40°	1828.6	1856.7	1916.7	1931.2	1925.2
42.5°	1758.7	1763.7	1815.1	1831.8	1805.2
45°	1636.9	1667.4	1695.1	1738.8	1697.6
47.5°	1533.2	1547.4	1607.1	1618.8	1597.1
50°	1439.1	1444.1	1504.1	1489.5	1475.3
52.5°	1320.9	1341.8	1375.6	1372.7	1356.0
55°	1223.6	1215.4	1247.4	1238.9	1238.5
57.5°	1106.8	1121.0	1147.2	1133.8	1112.1
60°	997.4	997.8	1007.3	992.1	989.2
62.5°	875.6	879.9	882.0	863.2	893.7
65°	751.7	741.7	770.9	741.4	746.4
67.5°	637.7	642.7	639.8	621.4	628.5
70°	522.0	528.3	523.7	502.8	509.2
72.5°	416.1	408.3	413.3	387.0	399.1
75°	312.8	306.4	312.1	290.1	300.0
77.5°	213.0	218.0	214.5	202.7	209.5
80°	140.6	136.7	136.7	130.0	131.4
82.5°	82.0	78.1	77.1	74.9	78.1
85°	38.3	37.3	38.0	36.9	35.5
87.5°	13.8	14.2	14.2	13.5	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)