

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: P589319

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589319
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

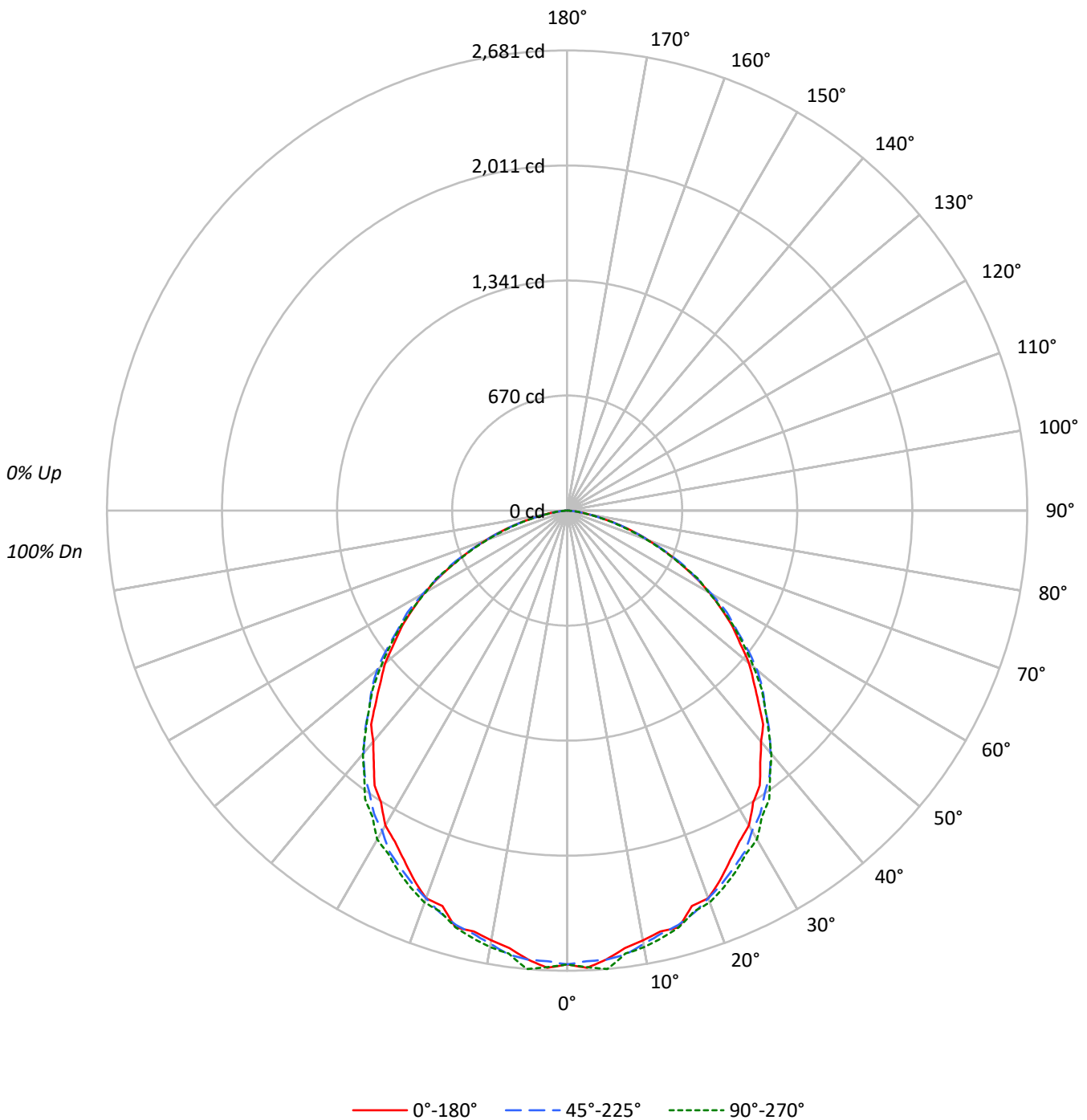
Lumens per Lamp: N/A
Luminaire Lumens: 6663.0 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	7114	7114	7114
5°	7091	7094	7243
10°	6947	7007	7057
15°	7002	6964	7003
20°	6883	6883	6957
25°	6672	6818	6893
30°	6580	6696	6874
35°	6425	6593	6742
40°	6175	6473	6502
45°	5989	6202	6211
50°	5792	6053	5938
55°	5519	5626	5586
60°	5160	5212	5118
65°	4601	4719	4569
70°	3948	3961	3851
75°	3126	3119	2999
80°	2095	2036	1957
85°	1139	1127	1053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.7	3.7
10°-20°	704.8	10.6
20°-30°	1055.9	15.8
30°-40°	1251.5	18.8
40°-50°	1253.8	18.8
50°-60°	1064.3	16.0
60°-70°	717.5	10.8
70°-80°	315.3	4.7
80°-90°	51.2	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°	2009.4	30.2
0°-40°	3260.9	48.9
0°-60°	5579.0	83.7
0°-90°	6663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6663.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2644	2644	2644	2644	2644	
5°	2625	2619	2626	2618	2681	247
15°	2513	2484	2500	2513	2514	700
25°	2247	2259	2296	2326	2322	1039
35°	1956	1962	2007	2054	2052	1214
45°	1574	1603	1630	1672	1632	1217
55°	1176	1168	1199	1191	1191	1046
65°	723	713	741	713	718	719
75°	301	295	300	279	288	322
85°	37	36	36	36	34	53
90°	0	0	0	0	0	



TEST NUMBER: P589319

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-82-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2643.7	2643.7	2643.7	2643.7	2643.7
2.5°	2666.6	2646.4	2627.7	2649.5	2662.8
5°	2624.9	2618.8	2626.0	2618.1	2681.3
7.5°	2571.0	2594.6	2608.2	2599.7	2603.4
10°	2542.3	2534.1	2564.5	2585.7	2582.6
12.5°	2511.6	2523.9	2525.6	2548.5	2550.5
15°	2513.3	2484.3	2499.7	2512.6	2513.7
17.5°	2415.7	2447.1	2457.7	2487.4	2450.5
20°	2403.7	2380.9	2403.7	2434.1	2429.3
22.5°	2330.4	2304.8	2353.9	2380.9	2379.2
25°	2247.1	2259.4	2296.2	2326.3	2321.5
27.5°	2174.0	2188.4	2240.9	2282.2	2255.6
30°	2117.7	2110.5	2154.9	2191.8	2212.3
32.5°	2017.0	2042.9	2094.8	2131.4	2111.9
35°	1955.9	1961.7	2007.1	2053.5	2052.2
37.5°	1849.1	1876.0	1939.9	1952.8	1940.9
40°	1757.9	1784.9	1842.6	1856.6	1850.8
42.5°	1690.7	1695.5	1745.0	1761.0	1735.4
45°	1573.6	1603.0	1629.6	1671.6	1632.0
47.5°	1473.9	1487.6	1544.9	1556.2	1535.4
50°	1383.5	1388.2	1445.9	1431.9	1418.3
52.5°	1269.8	1289.9	1322.4	1319.6	1303.6
55°	1176.3	1168.4	1199.1	1190.9	1190.6
57.5°	1064.0	1077.6	1102.9	1089.9	1069.1
60°	958.8	959.2	968.4	953.7	951.0
62.5°	841.8	845.9	847.9	829.8	859.2
65°	722.6	713.1	741.1	712.7	717.5
67.5°	613.1	617.8	615.1	597.4	604.2
70°	501.8	507.9	503.5	483.3	489.5
72.5°	400.1	392.5	397.3	372.1	383.7
75°	300.7	294.6	300.0	278.9	288.4
77.5°	204.8	209.6	206.2	194.9	201.4
80°	135.2	131.4	131.4	124.9	126.3
82.5°	78.9	75.1	74.1	72.0	75.1
85°	36.9	35.8	36.5	35.5	34.1
87.5°	13.3	13.7	13.7	13.0	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)