

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: P589325

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-93-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589325
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-93-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

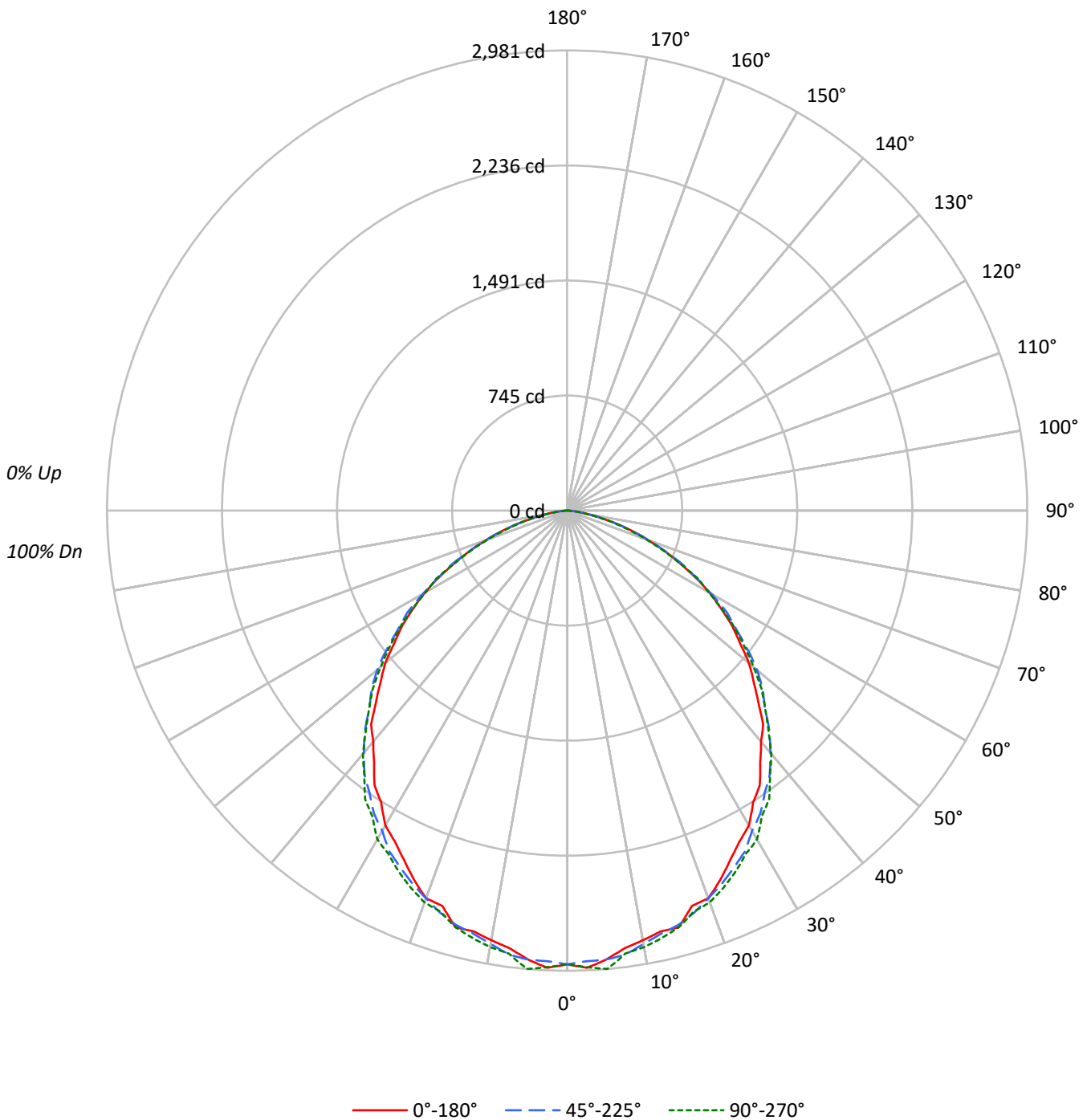
Lumens per Lamp: N/A
Luminaire Lumens: 7408.0 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589325

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589325

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-93-84-EDD

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	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					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°	7910	7910	7910
5°	7883	7887	8053
10°	7724	7791	7846
15°	7785	7743	7786
20°	7653	7653	7735
25°	7418	7580	7663
30°	7316	7444	7643
35°	7144	7331	7495
40°	6866	7196	7228
45°	6658	6895	6905
50°	6440	6730	6602
55°	6136	6255	6210
60°	5737	5795	5690
65°	5116	5246	5079
70°	4389	4404	4282
75°	3476	3468	3334
80°	2329	2264	2176
85°	1266	1254	1173



TEST NUMBER: P589325

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.5	3.7
10°-20°	783.6	10.6
20°-30°	1174.0	15.8
30°-40°	1391.4	18.8
40°-50°	1394.0	18.8
50°-60°	1183.3	16.0
60°-70°	797.8	10.8
70°-80°	350.5	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°	2234.1	30.2
0°-40°	3625.5	48.9
0°-60°	6202.8	83.7
0°-90°	7408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7408.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2939	2939	2939	2939	2939	
5°	2918	2912	2920	2911	2981	275
15°	2794	2762	2779	2794	2795	779
25°	2498	2512	2553	2586	2581	1155
35°	2175	2181	2232	2283	2282	1350
45°	1750	1782	1812	1858	1814	1353
55°	1308	1299	1333	1324	1324	1163
65°	803	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	



TEST NUMBER: P589325

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2939.3	2939.3	2939.3	2939.3	2939.3
2.5°	2964.7	2942.3	2921.5	2945.8	2960.6
5°	2918.4	2911.6	2919.6	2910.8	2981.1
7.5°	2858.5	2884.7	2899.8	2890.4	2894.5
10°	2826.6	2817.5	2851.3	2874.8	2871.4
12.5°	2792.4	2806.1	2808.0	2833.4	2835.7
15°	2794.3	2762.1	2779.2	2793.6	2794.7
17.5°	2685.8	2720.7	2732.5	2765.5	2724.5
20°	2672.5	2647.1	2672.5	2706.3	2701.0
22.5°	2590.9	2562.5	2617.1	2647.1	2645.2
25°	2498.3	2512.0	2553.0	2586.4	2581.0
27.5°	2417.1	2433.0	2491.5	2537.4	2507.8
30°	2354.5	2346.5	2395.8	2436.8	2459.6
32.5°	2242.5	2271.4	2329.1	2369.7	2348.0
35°	2174.6	2181.0	2231.5	2283.1	2281.6
37.5°	2055.8	2085.8	2156.8	2171.2	2157.9
40°	1954.5	1984.5	2048.6	2064.2	2057.7
42.5°	1879.7	1885.0	1940.1	1957.9	1929.4
45°	1749.5	1782.2	1811.8	1858.5	1814.4
47.5°	1638.7	1653.9	1717.7	1730.2	1707.0
50°	1538.2	1543.5	1607.6	1592.0	1576.9
52.5°	1411.8	1434.2	1470.2	1467.2	1449.3
55°	1307.8	1299.1	1333.2	1324.1	1323.7
57.5°	1182.9	1198.1	1226.2	1211.8	1188.6
60°	1066.0	1066.4	1076.7	1060.4	1057.3
62.5°	935.9	940.4	942.7	922.6	955.2
65°	803.4	792.8	823.9	792.4	797.7
67.5°	681.6	686.9	683.9	664.1	671.7
70°	557.9	564.7	559.8	537.4	544.2
72.5°	444.8	436.4	441.7	413.7	426.6
75°	334.3	327.5	333.6	310.1	320.7
77.5°	227.7	233.0	229.2	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	39.8	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)