

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: P589347

Luminaire Tested: **FMR-24-2-LD4-3HI-50-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589347
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-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

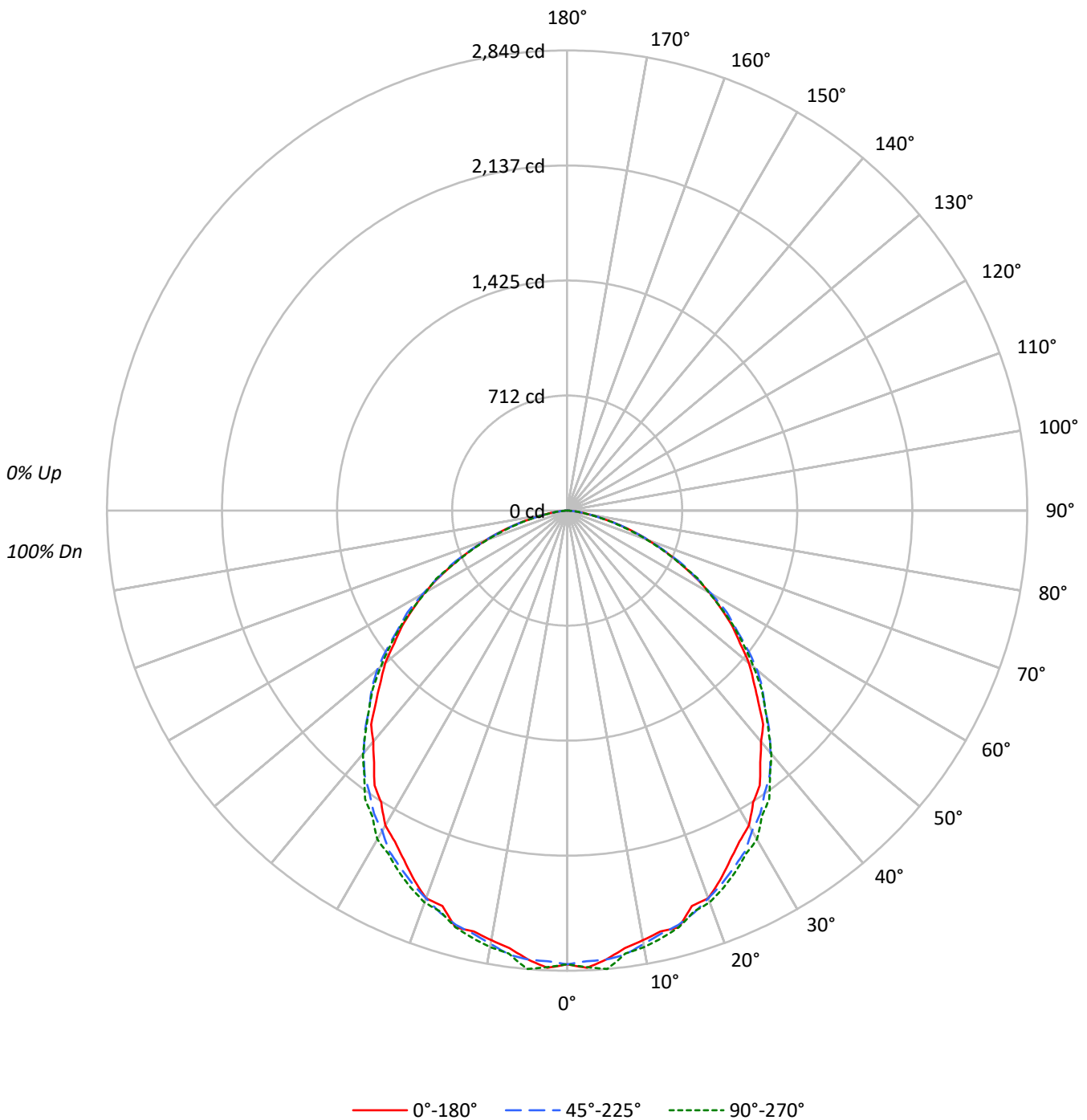
Lumens per Lamp: N/A
Luminaire Lumens: 7080.0 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	7559	7559	7559
5°	7534	7537	7696
10°	7382	7446	7499
15°	7440	7400	7441
20°	7314	7314	7392
25°	7089	7244	7324
30°	6992	7115	7304
35°	6827	7006	7163
40°	6562	6878	6908
45°	6363	6590	6599
50°	6154	6432	6309
55°	5864	5978	5935
60°	5483	5538	5438
65°	4890	5014	4855
70°	4195	4209	4092
75°	3322	3315	3187
80°	2225	2163	2080
85°	1210	1198	1121



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.2	3.7
10°-20°	748.9	10.6
20°-30°	1122.0	15.8
30°-40°	1329.8	18.8
40°-50°	1332.3	18.8
50°-60°	1130.9	16.0
60°-70°	762.4	10.8
70°-80°	335.0	4.7
80°-90°	54.4	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°	2135.2	30.2
0°-40°	3465.0	48.9
0°-60°	5928.1	83.7
0°-90°	7080.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7080.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2809	2809	2809	2809	2809	
5°	2789	2783	2790	2782	2849	263
15°	2671	2640	2656	2670	2671	744
25°	2388	2401	2440	2472	2467	1104
35°	2078	2084	2133	2182	2181	1290
45°	1672	1703	1732	1776	1734	1293
55°	1250	1242	1274	1266	1265	1112
65°	768	758	787	757	762	764
75°	320	313	319	296	306	342
85°	39	38	39	38	36	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2809.2	2809.2	2809.2	2809.2	2809.2
2.5°	2833.5	2812.1	2792.1	2815.3	2829.5
5°	2789.2	2782.7	2790.3	2782.0	2849.1
7.5°	2731.9	2756.9	2771.4	2762.4	2766.4
10°	2701.4	2692.7	2725.0	2747.5	2744.2
12.5°	2668.8	2681.9	2683.7	2708.0	2710.1
15°	2670.6	2639.8	2656.1	2669.9	2671.0
17.5°	2566.9	2600.2	2611.5	2643.0	2603.9
20°	2554.2	2529.9	2554.2	2586.5	2581.4
22.5°	2476.2	2449.0	2501.2	2529.9	2528.1
25°	2387.7	2400.8	2439.9	2471.8	2466.8
27.5°	2310.1	2325.3	2381.2	2425.1	2396.8
30°	2250.2	2242.6	2289.8	2328.9	2350.7
32.5°	2143.2	2170.8	2225.9	2264.7	2244.1
35°	2078.3	2084.5	2132.7	2182.0	2180.6
37.5°	1964.8	1993.4	2061.3	2075.0	2062.4
40°	1867.9	1896.6	1957.9	1972.8	1966.6
42.5°	1796.5	1801.6	1854.2	1871.2	1844.0
45°	1672.1	1703.3	1731.6	1776.2	1734.1
47.5°	1566.2	1580.7	1641.6	1653.6	1631.5
50°	1470.1	1475.1	1536.4	1521.6	1507.0
52.5°	1349.3	1370.7	1405.1	1402.2	1385.2
55°	1249.9	1241.5	1274.2	1265.5	1265.1
57.5°	1130.6	1145.1	1171.9	1158.1	1136.0
60°	1018.8	1019.2	1029.0	1013.4	1010.5
62.5°	894.4	898.8	901.0	881.7	912.9
65°	767.9	757.7	787.4	757.3	762.4
67.5°	651.4	656.5	653.6	634.7	642.0
70°	533.2	539.7	535.0	513.6	520.1
72.5°	425.1	417.1	422.2	395.4	407.7
75°	319.5	313.0	318.8	296.3	306.5
77.5°	217.6	222.7	219.1	207.1	214.0
80°	143.6	139.6	139.6	132.8	134.2
82.5°	83.8	79.8	78.7	76.5	79.8
85°	39.2	38.1	38.8	37.7	36.3
87.5°	14.1	14.5	14.5	13.8	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)