

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: P589601

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589601
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-LD4-4HI-40-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

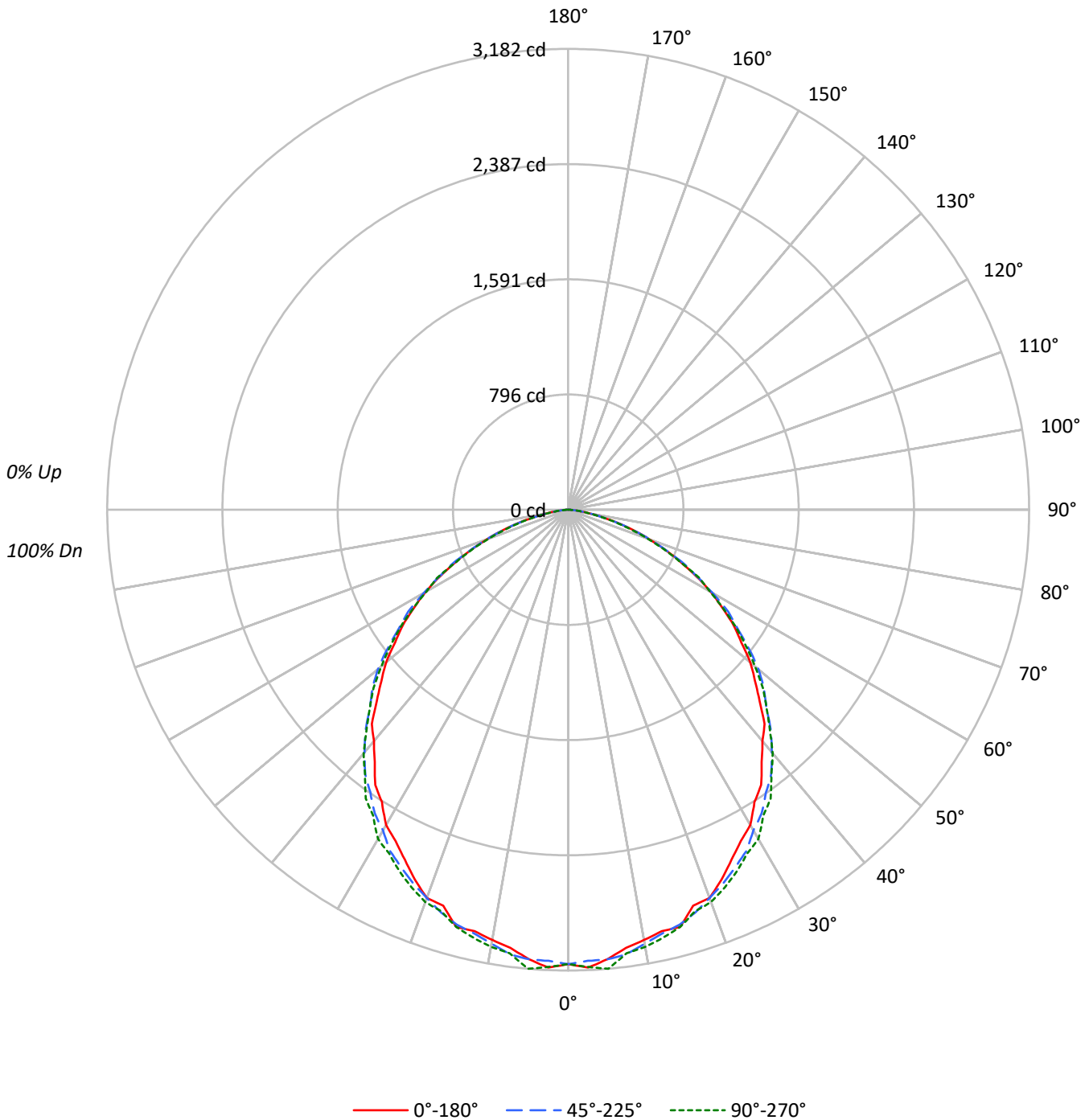
Lumens per Lamp: N/A
Luminaire Lumens: 7907.0 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8442	8442	8442
5°	8414	8418	8595
10°	8244	8316	8375
15°	8309	8264	8310
20°	8169	8169	8256
25°	7918	8091	8180
30°	7809	7946	8158
35°	7625	7824	8000
40°	7328	7681	7715
45°	7107	7359	7370
50°	6873	7183	7046
55°	6549	6676	6629
60°	6124	6185	6074
65°	5460	5599	5422
70°	4685	4701	4570
75°	3711	3702	3559
80°	2486	2417	2323
85°	1349	1337	1250



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.1	3.7
10°-20°	836.4	10.6
20°-30°	1253.1	15.8
30°-40°	1485.1	18.8
40°-50°	1487.9	18.8
50°-60°	1263.0	16.0
60°-70°	851.5	10.8
70°-80°	374.2	4.7
80°-90°	60.8	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°	2384.6	30.2
0°-40°	3869.7	48.9
0°-60°	6620.6	83.7
0°-90°	7907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3137	3137	3137	3137	3137	
5°	3115	3108	3116	3107	3182	294
15°	2983	2948	2966	2982	2983	831
25°	2667	2681	2725	2761	2755	1233
35°	2321	2328	2382	2437	2435	1441
45°	1867	1902	1934	1984	1937	1445
55°	1396	1387	1423	1413	1413	1242
65°	858	846	879	846	852	853
75°	357	350	356	331	342	382
85°	44	42	43	42	40	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3137.3	3137.3	3137.3	3137.3	3137.3
2.5°	3164.4	3140.5	3118.3	3144.2	3160.0
5°	3115.0	3107.7	3116.2	3106.9	3181.9
7.5°	3051.0	3079.0	3095.2	3085.0	3089.5
10°	3017.0	3007.3	3043.3	3068.4	3064.8
12.5°	2980.5	2995.1	2997.1	3024.3	3026.7
15°	2982.6	2948.1	2966.4	2981.7	2983.0
17.5°	2866.7	2904.0	2916.5	2951.8	2908.0
20°	2852.5	2825.4	2852.5	2888.6	2882.9
22.5°	2765.4	2735.1	2793.4	2825.4	2823.4
25°	2666.6	2681.2	2724.9	2760.6	2754.9
27.5°	2579.9	2596.9	2659.3	2708.3	2676.7
30°	2513.1	2504.6	2557.2	2601.0	2625.3
32.5°	2393.6	2424.4	2485.9	2529.3	2506.2
35°	2321.1	2328.0	2381.8	2436.9	2435.3
37.5°	2194.3	2226.3	2302.0	2317.4	2303.3
40°	2086.1	2118.1	2186.6	2203.2	2196.3
42.5°	2006.3	2012.0	2070.7	2089.8	2059.4
45°	1867.4	1902.2	1933.8	1983.6	1936.7
47.5°	1749.1	1765.3	1833.4	1846.7	1822.0
50°	1641.8	1647.4	1715.9	1699.3	1683.1
52.5°	1506.9	1530.8	1569.3	1566.0	1547.0
55°	1395.9	1386.6	1423.0	1413.3	1412.9
57.5°	1262.6	1278.8	1308.8	1293.4	1268.7
60°	1137.9	1138.3	1149.2	1131.8	1128.5
62.5°	998.9	1003.8	1006.2	984.7	1019.6
65°	857.5	846.2	879.4	845.8	851.5
67.5°	727.5	733.2	729.9	708.9	717.0
70°	595.5	602.8	597.5	573.6	580.9
72.5°	474.7	465.8	471.5	441.5	455.3
75°	356.9	349.6	356.1	330.9	342.3
77.5°	243.0	248.7	244.7	231.3	239.0
80°	160.4	156.0	156.0	148.3	149.9
82.5°	93.6	89.1	87.9	85.5	89.1
85°	43.7	42.5	43.3	42.1	40.5
87.5°	15.8	16.2	16.2	15.4	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)