

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: P589790

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589790
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-LD4-4STD-40-UNV-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

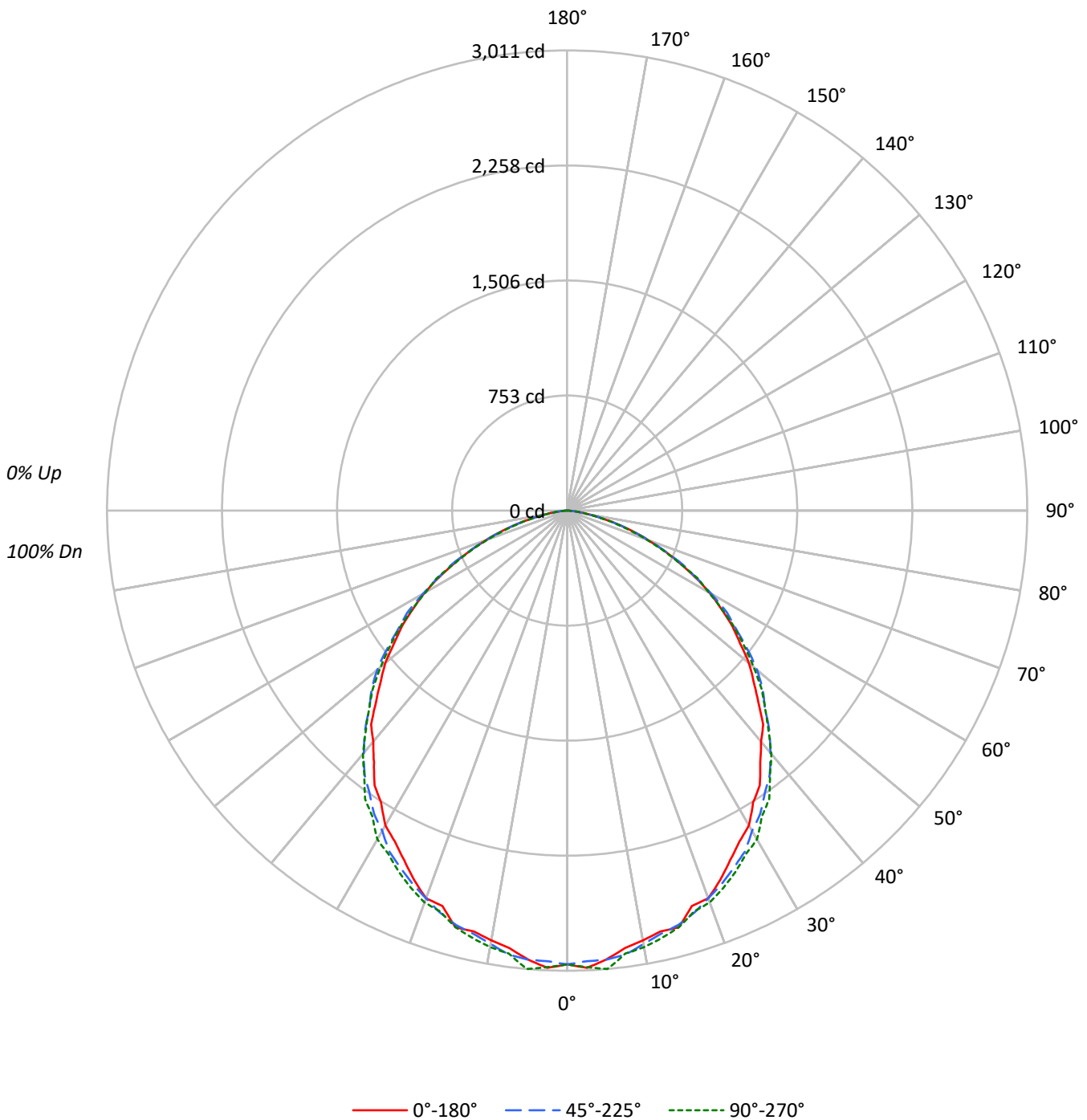
Lumens per Lamp: N/A
Luminaire Lumens: 7483.0 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	7990	7990	7990
5°	7963	7966	8134
10°	7802	7870	7925
15°	7863	7821	7865
20°	7731	7731	7813
25°	7493	7657	7741
30°	7390	7520	7720
35°	7216	7405	7571
40°	6935	7269	7301
45°	6726	6965	6975
50°	6504	6798	6668
55°	6198	6318	6273
60°	5795	5853	5748
65°	5168	5300	5131
70°	4434	4449	4325
75°	3511	3504	3368
80°	2352	2287	2197
85°	1278	1266	1183



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.3	3.7
10°-20°	791.5	10.6
20°-30°	1185.9	15.8
30°-40°	1405.5	18.8
40°-50°	1408.1	18.8
50°-60°	1195.2	16.0
60°-70°	805.8	10.8
70°-80°	354.1	4.7
80°-90°	57.5	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°	2256.7	30.2
0°-40°	3662.2	48.9
0°-60°	6265.5	83.7
0°-90°	7483.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7483.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2969	2969	2969	2969	2969	
5°	2948	2941	2949	2940	3011	278
15°	2823	2790	2807	2822	2823	786
25°	2524	2537	2579	2612	2607	1167
35°	2197	2203	2254	2306	2305	1364
45°	1767	1800	1830	1877	1833	1367
55°	1321	1312	1347	1338	1337	1175
65°	812	801	832	800	806	807
75°	338	331	337	313	324	362
85°	41	40	41	40	38	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2969.1	2969.1	2969.1	2969.1	2969.1
2.5°	2994.8	2972.1	2951.0	2975.6	2990.5
5°	2948.0	2941.1	2949.1	2940.3	3011.2
7.5°	2887.4	2913.9	2929.2	2919.6	2923.8
10°	2855.2	2846.0	2880.1	2903.9	2900.4
12.5°	2820.7	2834.5	2836.4	2862.1	2864.4
15°	2822.6	2790.0	2807.3	2821.9	2823.0
17.5°	2713.0	2748.3	2760.1	2793.5	2752.1
20°	2699.6	2673.9	2699.6	2733.7	2728.3
22.5°	2617.1	2588.4	2643.6	2673.9	2672.0
25°	2523.6	2537.4	2578.8	2612.5	2607.2
27.5°	2441.6	2457.7	2516.7	2563.1	2533.2
30°	2378.3	2370.3	2420.1	2461.5	2484.5
32.5°	2265.2	2294.4	2352.6	2393.7	2371.8
35°	2196.6	2203.1	2254.1	2306.2	2304.7
37.5°	2076.6	2106.9	2178.6	2193.2	2179.7
40°	1974.3	2004.6	2069.3	2085.1	2078.5
42.5°	1898.7	1904.1	1959.7	1977.7	1949.0
45°	1767.3	1800.2	1830.1	1877.3	1832.8
47.5°	1655.3	1670.7	1735.1	1747.7	1724.3
50°	1553.7	1559.1	1623.9	1608.2	1592.8
52.5°	1426.1	1448.7	1485.1	1482.0	1464.0
55°	1321.0	1312.2	1346.7	1337.5	1337.1
57.5°	1194.9	1210.2	1238.6	1224.0	1200.7
60°	1076.8	1077.2	1087.6	1071.1	1068.0
62.5°	945.3	949.9	952.2	931.9	964.9
65°	811.6	800.8	832.3	800.4	805.8
67.5°	688.5	693.9	690.8	670.9	678.5
70°	563.5	570.4	565.4	542.8	549.7
72.5°	449.3	440.9	446.2	417.9	430.9
75°	337.7	330.8	337.0	313.2	323.9
77.5°	230.0	235.4	231.5	218.9	226.2
80°	151.8	147.6	147.6	140.3	141.8
82.5°	88.6	84.3	83.2	80.9	84.3
85°	41.4	40.3	41.0	39.9	38.3
87.5°	15.0	15.3	15.3	14.6	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)