

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: P589345

Luminaire Tested: **FMR-24-2-LD4-3HI-50-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589345
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-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

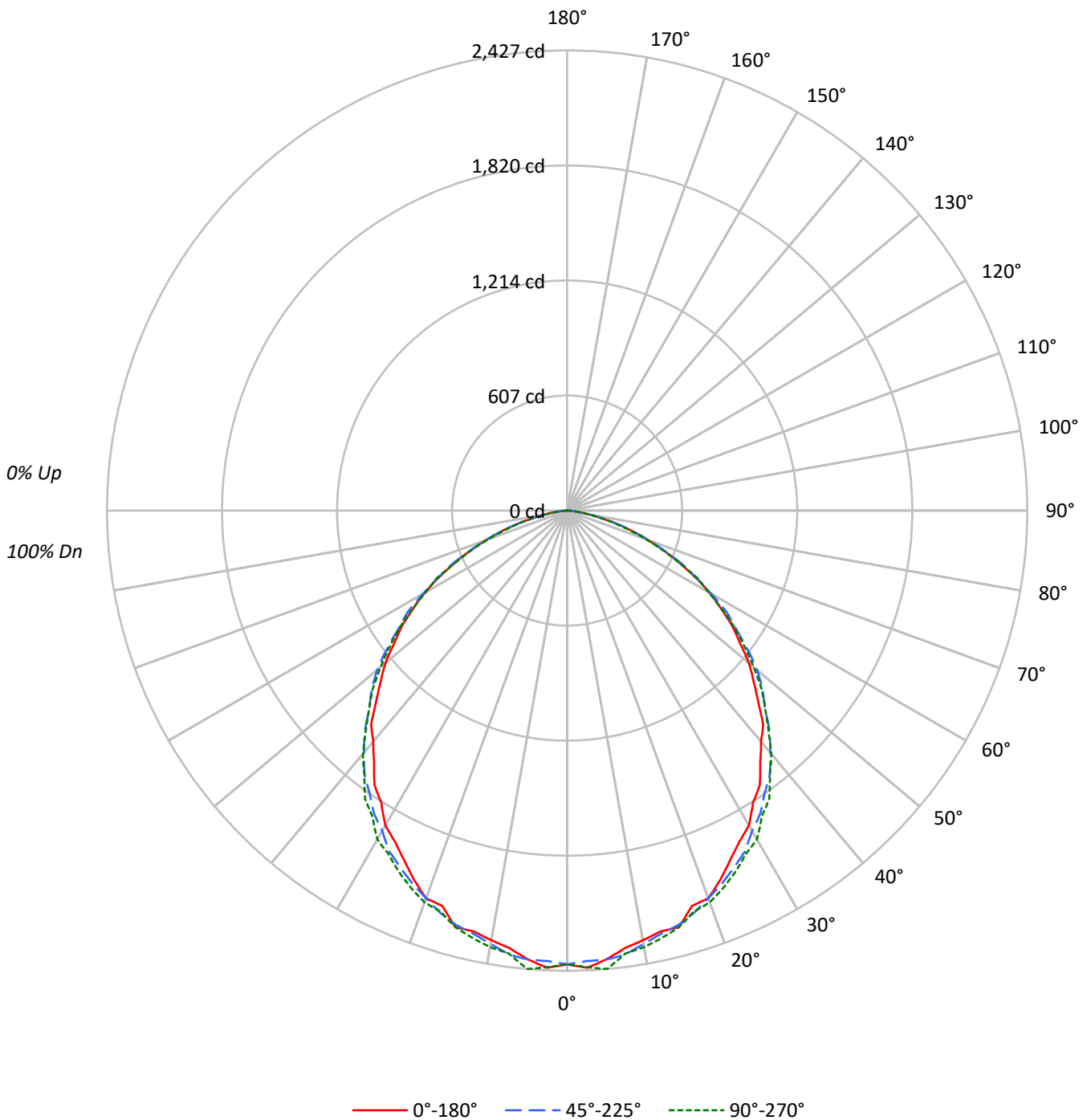
Lumens per Lamp: N/A
Luminaire Lumens: 6031.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6439	6439	6439
5°	6418	6421	6556
10°	6288	6343	6387
15°	6338	6303	6338
20°	6231	6231	6297
25°	6039	6171	6239
30°	5956	6061	6222
35°	5816	5968	6102
40°	5590	5859	5885
45°	5420	5613	5622
50°	5242	5479	5375
55°	4995	5092	5056
60°	4671	4717	4633
65°	4165	4271	4135
70°	3574	3585	3486
75°	2830	2824	2715
80°	1897	1844	1771
85°	1031	1022	954



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.1	3.7
10°-20°	637.9	10.6
20°-30°	955.8	15.8
30°-40°	1132.8	18.8
40°-50°	1134.9	18.8
50°-60°	963.3	16.0
60°-70°	649.5	10.8
70°-80°	285.4	4.7
80°-90°	46.4	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°	1818.8	30.2
0°-40°	2951.6	48.9
0°-60°	5049.8	83.7
0°-90°	6031.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6031.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2393	2393	2393	2393	2393	
5°	2376	2370	2377	2370	2427	224
15°	2275	2249	2263	2274	2275	634
25°	2034	2045	2078	2106	2101	940
35°	1770	1776	1817	1859	1858	1099
45°	1424	1451	1475	1513	1477	1102
55°	1065	1058	1085	1078	1078	947
65°	654	645	671	645	649	651
75°	272	267	272	252	261	292
85°	33	32	33	32	31	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2392.9	2392.9	2392.9	2392.9	2392.9
2.5°	2413.6	2395.4	2378.4	2398.2	2410.3
5°	2376.0	2370.4	2376.9	2369.8	2426.9
7.5°	2327.1	2348.5	2360.8	2353.1	2356.5
10°	2301.2	2293.8	2321.3	2340.4	2337.6
12.5°	2273.4	2284.5	2286.0	2306.7	2308.6
15°	2274.9	2248.7	2262.6	2274.3	2275.2
17.5°	2186.6	2215.0	2224.6	2251.4	2218.1
20°	2175.7	2155.0	2175.7	2203.2	2198.9
22.5°	2109.3	2086.1	2130.6	2155.0	2153.5
25°	2033.9	2045.1	2078.4	2105.6	2101.3
27.5°	1967.8	1980.8	2028.4	2065.8	2041.7
30°	1916.8	1910.3	1950.5	1983.9	2002.4
32.5°	1825.7	1849.2	1896.1	1929.2	1911.6
35°	1770.4	1775.6	1816.7	1858.7	1857.5
37.5°	1673.7	1698.1	1755.9	1767.6	1756.8
40°	1591.2	1615.6	1667.8	1680.5	1675.2
42.5°	1530.3	1534.6	1579.4	1594.0	1570.8
45°	1424.3	1450.9	1475.0	1513.0	1477.2
47.5°	1334.1	1346.5	1398.4	1408.6	1389.7
50°	1252.2	1256.6	1308.8	1296.1	1283.8
52.5°	1149.4	1167.6	1196.9	1194.5	1179.9
55°	1064.7	1057.6	1085.4	1078.0	1077.7
57.5°	963.0	975.4	998.3	986.5	967.7
60°	867.9	868.2	876.5	863.3	860.8
62.5°	761.9	765.6	767.5	751.1	777.7
65°	654.1	645.4	670.8	645.1	649.4
67.5°	554.9	559.2	556.8	540.7	546.9
70°	454.2	459.7	455.7	437.5	443.1
72.5°	362.1	355.3	359.6	336.8	347.3
75°	272.2	266.6	271.6	252.4	261.1
77.5°	185.4	189.7	186.6	176.4	182.3
80°	122.4	119.0	119.0	113.1	114.3
82.5°	71.4	68.0	67.0	65.2	68.0
85°	33.4	32.4	33.1	32.1	30.9
87.5°	12.0	12.4	12.4	11.7	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)