

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: P589801

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589801
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-82-88-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

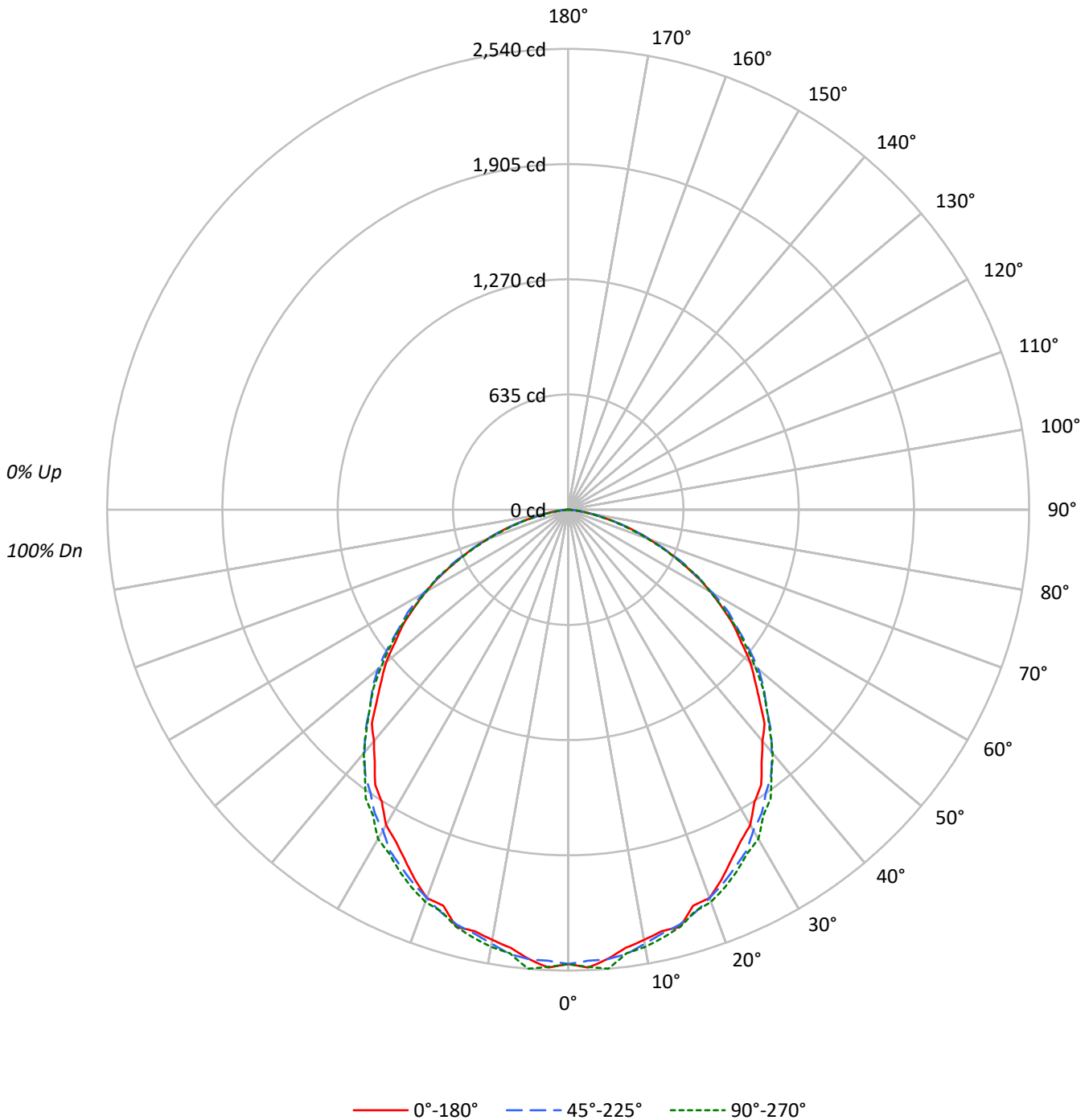
Lumens per Lamp: N/A
Luminaire Lumens: 6311.0 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6738	6738	6738
5°	6716	6719	6860
10°	6580	6637	6684
15°	6632	6596	6633
20°	6520	6520	6589
25°	6320	6458	6529
30°	6233	6342	6511
35°	6086	6245	6385
40°	5849	6131	6158
45°	5672	5874	5883
50°	5486	5733	5624
55°	5227	5329	5291
60°	4888	4936	4848
65°	4358	4469	4327
70°	3740	3752	3648
75°	2961	2955	2840
80°	1984	1929	1853
85°	1078	1068	997



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.5	3.7
10°-20°	667.6	10.6
20°-30°	1000.1	15.8
30°-40°	1185.4	18.8
40°-50°	1187.6	18.8
50°-60°	1008.0	16.0
60°-70°	679.6	10.8
70°-80°	298.6	4.7
80°-90°	48.5	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°	1903.2	30.2
0°-40°	3088.6	48.9
0°-60°	5284.2	83.7
0°-90°	6311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6311.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2504	2504	2504	2504	2504	
5°	2486	2480	2487	2480	2540	234
15°	2380	2353	2368	2380	2381	663
25°	2128	2140	2175	2203	2199	984
35°	1853	1858	1901	1945	1944	1150
45°	1490	1518	1544	1583	1546	1153
55°	1114	1107	1136	1128	1128	991
65°	684	675	702	675	680	681
75°	285	279	284	264	273	305
85°	35	34	35	34	32	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2504.0	2504.0	2504.0	2504.0	2504.0
2.5°	2525.7	2506.6	2488.8	2509.5	2522.2
5°	2486.3	2480.4	2487.2	2479.8	2539.6
7.5°	2435.2	2457.5	2470.4	2462.3	2465.9
10°	2408.0	2400.3	2429.0	2449.1	2446.2
12.5°	2378.9	2390.6	2392.2	2413.8	2415.8
15°	2380.5	2353.1	2367.6	2379.9	2380.9
17.5°	2288.1	2317.8	2327.8	2356.0	2321.1
20°	2276.8	2255.1	2276.8	2305.5	2301.0
22.5°	2207.2	2183.0	2229.6	2255.1	2253.5
25°	2128.4	2140.0	2174.9	2203.4	2198.8
27.5°	2059.2	2072.7	2122.5	2161.7	2136.4
30°	2005.8	1999.0	2041.1	2076.0	2095.4
32.5°	1910.4	1935.0	1984.2	2018.8	2000.3
35°	1852.6	1858.1	1901.1	1945.0	1943.7
37.5°	1751.4	1776.9	1837.4	1849.7	1838.3
40°	1665.1	1690.6	1745.2	1758.5	1753.0
42.5°	1601.4	1605.9	1652.8	1668.0	1643.7
45°	1490.5	1518.3	1543.5	1583.3	1545.8
47.5°	1396.1	1409.0	1463.3	1474.0	1454.3
50°	1310.4	1314.9	1369.5	1356.3	1343.4
52.5°	1202.7	1221.8	1252.5	1249.9	1234.7
55°	1114.1	1106.7	1135.8	1128.0	1127.7
57.5°	1007.8	1020.7	1044.6	1032.3	1012.6
60°	908.2	908.5	917.2	903.3	900.7
62.5°	797.3	801.2	803.1	786.0	813.8
65°	684.4	675.4	701.9	675.1	679.6
67.5°	580.7	585.2	582.6	565.8	572.3
70°	475.3	481.1	476.9	457.8	463.6
72.5°	378.9	371.8	376.3	352.4	363.4
75°	284.8	279.0	284.2	264.1	273.2
77.5°	194.0	198.5	195.3	184.6	190.8
80°	128.0	124.5	124.5	118.3	119.6
82.5°	74.7	71.1	70.2	68.2	71.1
85°	34.9	33.9	34.6	33.6	32.3
87.5°	12.6	12.9	12.9	12.3	11.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)