

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: P589312

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589312
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-40-UNV-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

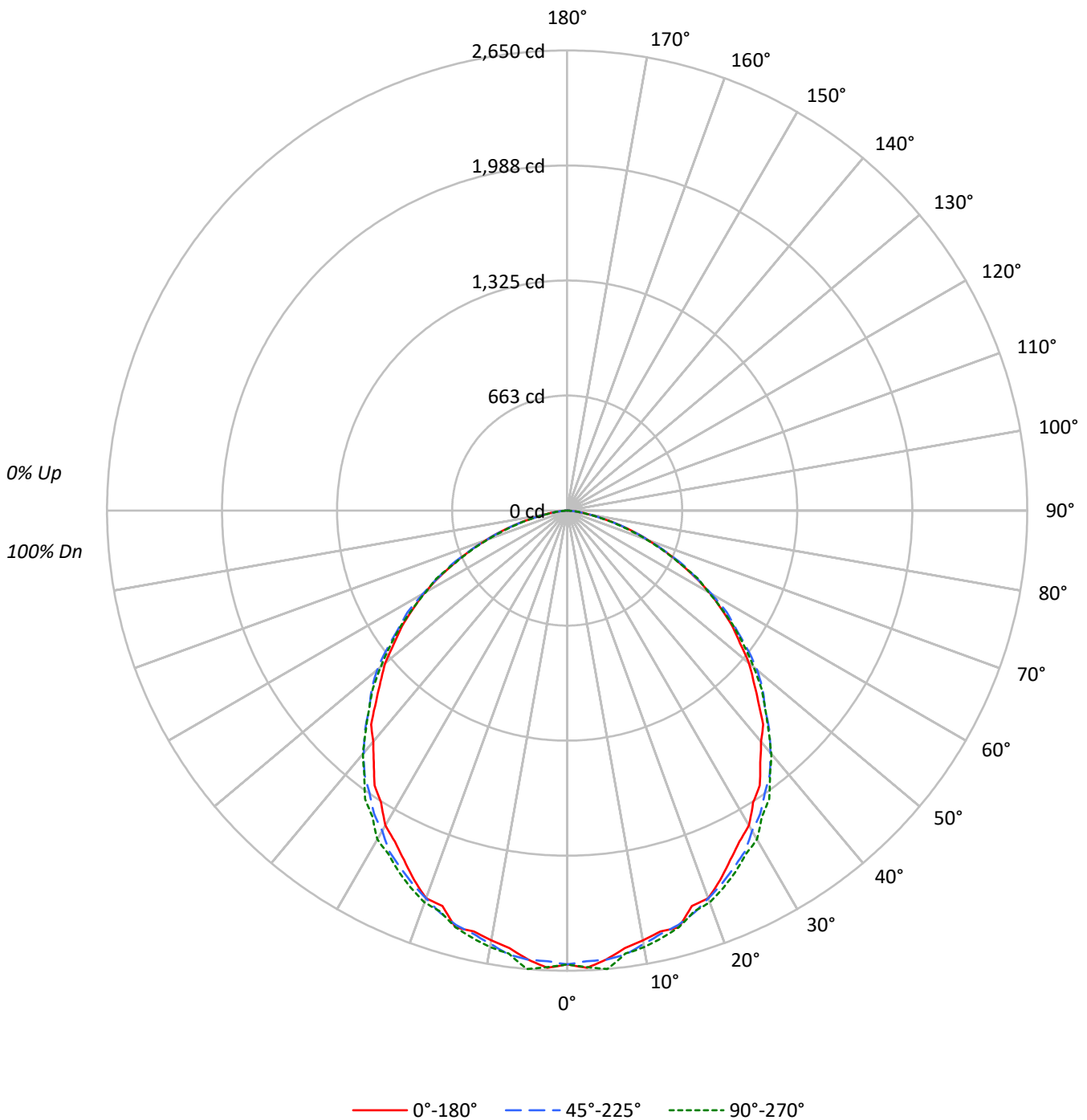
Lumens per Lamp: N/A
Luminaire Lumens: 6586.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	7032	7032	7032
5°	7009	7011	7159
10°	6867	6927	6976
15°	6921	6883	6922
20°	6804	6804	6877
25°	6595	6739	6813
30°	6504	6618	6795
35°	6351	6517	6663
40°	6104	6398	6426
45°	5919	6130	6139
50°	5725	5983	5869
55°	5455	5561	5521
60°	5101	5152	5059
65°	4548	4664	4516
70°	3902	3916	3806
75°	3090	3084	2964
80°	2070	2013	1934
85°	1124	1115	1041



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.8	3.7
10°-20°	696.6	10.6
20°-30°	1043.7	15.8
30°-40°	1237.0	18.8
40°-50°	1239.3	18.8
50°-60°	1052.0	16.0
60°-70°	709.2	10.8
70°-80°	311.7	4.7
80°-90°	50.6	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°	1986.2	30.2
0°-40°	3223.2	48.9
0°-60°	5514.5	83.7
0°-90°	6586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6586.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2613	2613	2613	2613	2613	
5°	2595	2588	2596	2588	2650	245
15°	2484	2456	2471	2484	2485	692
25°	2221	2233	2270	2299	2295	1027
35°	1933	1939	1984	2030	2028	1200
45°	1555	1584	1611	1652	1613	1203
55°	1163	1155	1185	1177	1177	1034
65°	714	705	732	704	709	710
75°	297	291	297	276	285	319
85°	36	35	36	35	34	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2613.2	2613.2	2613.2	2613.2	2613.2
2.5°	2635.8	2615.9	2597.3	2618.9	2632.1
5°	2594.6	2588.5	2595.6	2587.9	2650.3
7.5°	2541.3	2564.6	2578.1	2569.6	2573.3
10°	2513.0	2504.9	2534.9	2555.8	2552.8
12.5°	2482.6	2494.7	2496.4	2519.0	2521.0
15°	2484.3	2455.6	2470.8	2483.6	2484.6
17.5°	2387.8	2418.8	2429.3	2458.6	2422.2
20°	2376.0	2353.4	2376.0	2406.0	2401.3
22.5°	2303.4	2278.1	2326.7	2353.4	2351.7
25°	2221.1	2233.2	2269.7	2299.4	2294.7
27.5°	2148.9	2163.1	2215.0	2255.9	2229.5
30°	2093.2	2086.1	2130.0	2166.4	2186.7
32.5°	1993.7	2019.3	2070.6	2106.7	2087.5
35°	1933.3	1939.0	1983.9	2029.8	2028.4
37.5°	1827.7	1854.3	1917.4	1930.3	1918.5
40°	1737.6	1764.3	1821.3	1835.1	1829.4
42.5°	1671.1	1675.9	1724.8	1740.6	1715.3
45°	1555.4	1584.4	1610.7	1652.2	1613.1
47.5°	1456.9	1470.4	1527.1	1538.2	1517.6
50°	1367.5	1372.2	1429.2	1415.4	1401.9
52.5°	1255.1	1275.0	1307.1	1304.4	1288.5
55°	1162.7	1154.9	1185.3	1177.2	1176.8
57.5°	1051.7	1065.2	1090.1	1077.3	1056.7
60°	947.8	948.1	957.2	942.7	940.0
62.5°	832.0	836.1	838.1	820.2	849.2
65°	714.3	704.8	732.5	704.5	709.2
67.5°	606.0	610.7	608.0	590.4	597.2
70°	496.0	502.1	497.7	477.8	483.8
72.5°	395.4	388.0	392.7	367.8	379.2
75°	297.2	291.2	296.6	275.7	285.1
77.5°	202.4	207.2	203.8	192.7	199.1
80°	133.6	129.9	129.9	123.5	124.8
82.5°	77.9	74.2	73.2	71.2	74.2
85°	36.4	35.4	36.1	35.1	33.7
87.5°	13.2	13.5	13.5	12.8	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)