

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: P589321

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589321
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-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

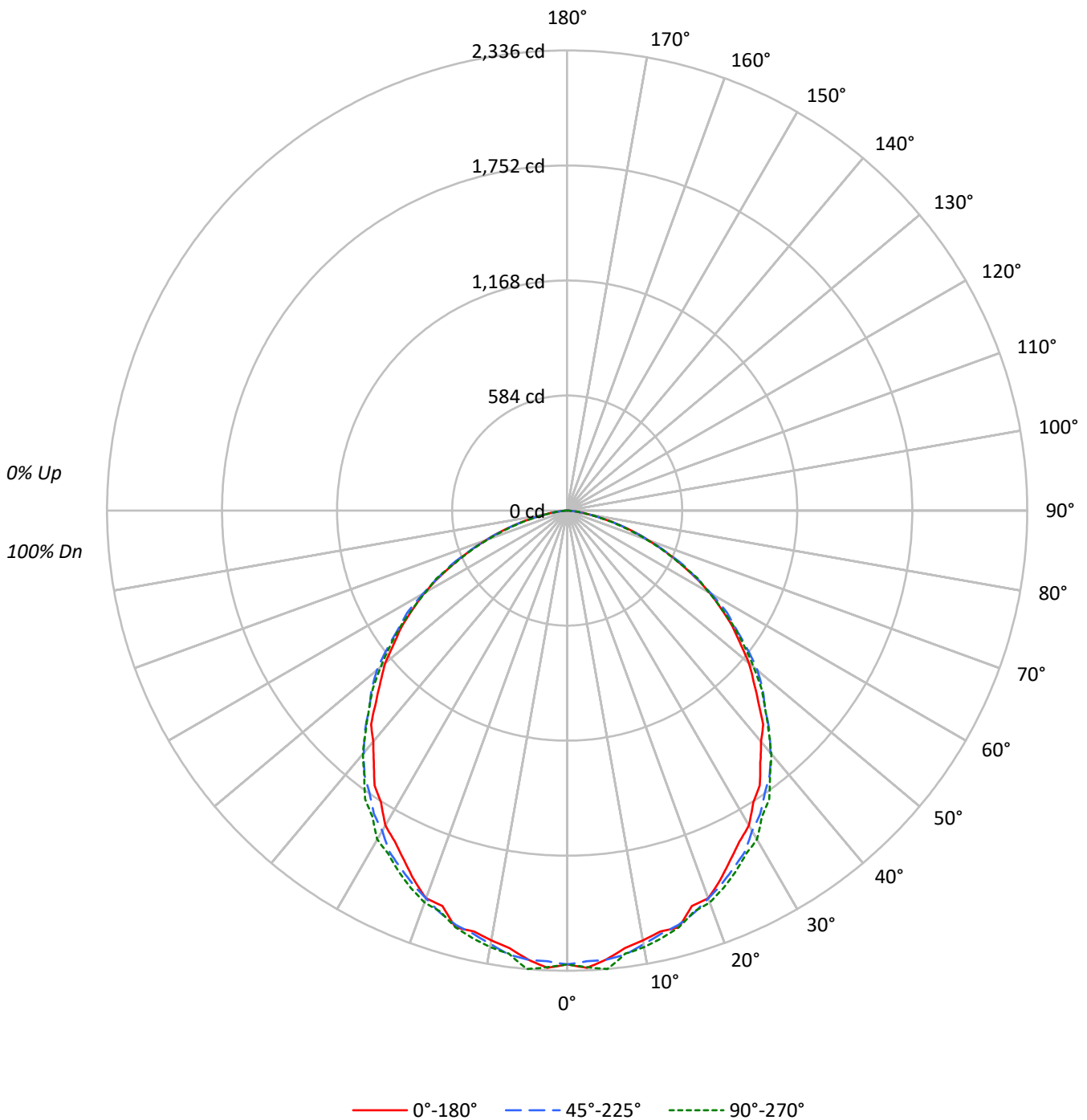
Lumens per Lamp: N/A
Luminaire Lumens: 5806.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6199	6199	6199
5°	6179	6181	6311
10°	6053	6106	6149
15°	6101	6068	6102
20°	5998	5998	6062
25°	5814	5941	6006
30°	5734	5835	5990
35°	5599	5745	5874
40°	5381	5640	5665
45°	5218	5404	5412
50°	5047	5275	5174
55°	4809	4902	4868
60°	4497	4541	4460
65°	4010	4111	3981
70°	3440	3452	3356
75°	2724	2718	2613
80°	1826	1774	1706
85°	991	982	917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.7	3.7
10°-20°	614.1	10.6
20°-30°	920.1	15.8
30°-40°	1090.5	18.8
40°-50°	1092.5	18.8
50°-60°	927.4	16.0
60°-70°	625.2	10.8
70°-80°	274.7	4.7
80°-90°	44.6	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°	1750.9	30.2
0°-40°	2841.5	48.9
0°-60°	4861.4	83.7
0°-90°	5806.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5806.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2304	2304	2304	2304	2304	
5°	2287	2282	2288	2281	2336	216
15°	2190	2165	2178	2190	2190	610
25°	1958	1969	2001	2027	2023	905
35°	1704	1709	1749	1789	1788	1058
45°	1371	1397	1420	1457	1422	1061
55°	1025	1018	1045	1038	1038	912
65°	630	621	646	621	625	626
75°	262	257	261	243	251	281
85°	32	31	32	31	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2303.7	2303.7	2303.7	2303.7	2303.7
2.5°	2323.6	2306.1	2289.7	2308.7	2320.3
5°	2287.3	2282.0	2288.2	2281.4	2336.4
7.5°	2240.3	2260.8	2272.7	2265.3	2268.6
10°	2215.3	2208.2	2234.7	2253.1	2250.4
12.5°	2188.6	2199.3	2200.8	2220.7	2222.5
15°	2190.1	2164.8	2178.2	2189.5	2190.3
17.5°	2105.0	2132.3	2141.6	2167.4	2135.3
20°	2094.6	2074.6	2094.6	2121.0	2116.9
22.5°	2030.6	2008.3	2051.1	2074.6	2073.2
25°	1958.0	1968.8	2000.9	2027.1	2022.9
27.5°	1894.4	1906.9	1952.7	1988.7	1965.5
30°	1845.3	1839.1	1877.7	1909.9	1927.7
32.5°	1757.6	1780.2	1825.4	1857.2	1840.3
35°	1704.3	1709.4	1748.9	1789.4	1788.2
37.5°	1611.2	1634.7	1690.4	1701.7	1691.2
40°	1531.8	1555.3	1605.6	1617.8	1612.7
42.5°	1473.2	1477.4	1520.5	1534.5	1512.2
45°	1371.2	1396.8	1420.0	1456.6	1422.1
47.5°	1284.3	1296.2	1346.2	1356.0	1337.9
50°	1205.5	1209.7	1260.0	1247.8	1235.9
52.5°	1106.5	1124.0	1152.3	1149.9	1135.9
55°	1025.0	1018.1	1044.9	1037.8	1037.5
57.5°	927.1	939.0	961.0	949.7	931.6
60°	835.5	835.8	843.8	831.0	828.7
62.5°	733.5	737.1	738.8	723.1	748.7
65°	629.7	621.4	645.7	621.1	625.2
67.5°	534.2	538.4	536.0	520.5	526.5
70°	437.2	442.6	438.7	421.2	426.5
72.5°	348.6	342.1	346.2	324.2	334.3
75°	262.0	256.7	261.4	243.0	251.3
77.5°	178.5	182.6	179.7	169.8	175.5
80°	117.8	114.5	114.5	108.9	110.1
82.5°	68.7	65.4	64.5	62.8	65.4
85°	32.1	31.2	31.8	30.9	29.7
87.5°	11.6	11.9	11.9	11.3	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)