

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: P589732

Luminaire Tested: **FMR-24-2-LD4-4LO-50-UNV-81-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589732
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-LD4-4LO-50-UNV-81-97-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

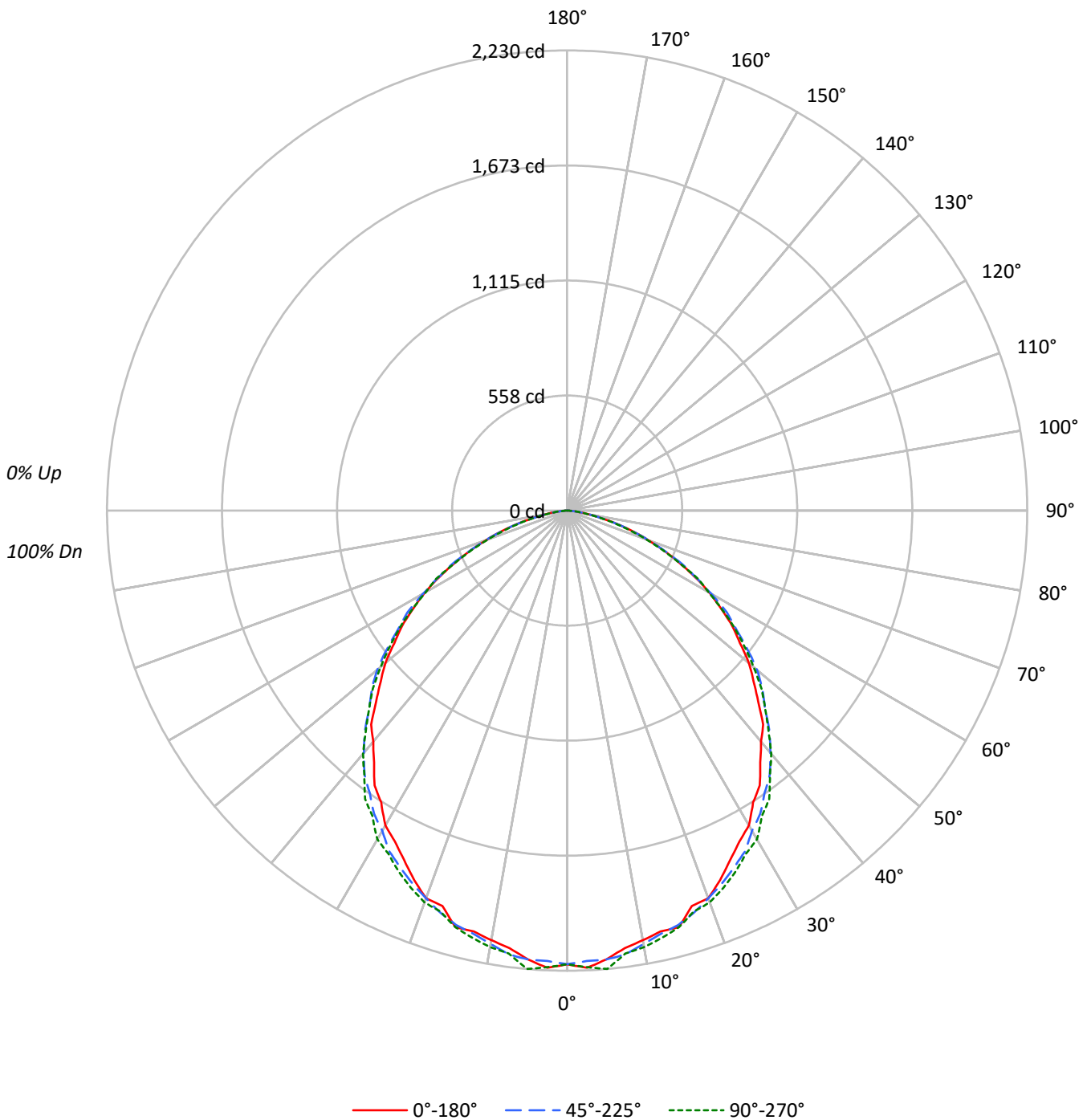
Lumens per Lamp: N/A
Luminaire Lumens: 5541.0 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	5916	5916	5916
5°	5897	5899	6023
10°	5777	5828	5869
15°	5823	5791	5824
20°	5724	5724	5785
25°	5548	5670	5732
30°	5472	5568	5716
35°	5343	5483	5606
40°	5135	5383	5407
45°	4980	5157	5165
50°	4816	5034	4938
55°	4589	4678	4645
60°	4292	4334	4256
65°	3826	3924	3799
70°	3283	3294	3203
75°	2600	2594	2494
80°	1742	1694	1627
85°	948	939	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.8	3.7
10°-20°	586.1	10.6
20°-30°	878.1	15.8
30°-40°	1040.7	18.8
40°-50°	1042.7	18.8
50°-60°	885.1	16.0
60°-70°	596.7	10.8
70°-80°	262.2	4.7
80°-90°	42.6	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°	1671.0	30.2
0°-40°	2711.8	48.9
0°-60°	4639.5	83.7
0°-90°	5541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5541.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2198	2198	2198	2198	2198	
5°	2183	2178	2184	2177	2230	206
15°	2090	2066	2079	2090	2090	582
25°	1869	1879	1910	1934	1931	864
35°	1626	1631	1669	1708	1707	1010
45°	1309	1333	1355	1390	1357	1012
55°	978	972	997	990	990	870
65°	601	593	616	593	597	598
75°	250	245	250	232	240	268
85°	31	30	30	30	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2198.5	2198.5	2198.5	2198.5	2198.5
2.5°	2217.5	2200.8	2185.2	2203.4	2214.4
5°	2182.9	2177.8	2183.8	2177.2	2229.8
7.5°	2138.1	2157.7	2169.0	2161.9	2165.0
10°	2114.2	2107.4	2132.7	2150.3	2147.7
12.5°	2088.7	2098.9	2100.3	2119.3	2121.0
15°	2090.1	2066.0	2078.7	2089.5	2090.4
17.5°	2008.9	2035.0	2043.8	2068.5	2037.9
20°	1999.0	1980.0	1999.0	2024.2	2020.3
22.5°	1937.9	1916.7	1957.5	1980.0	1978.5
25°	1868.7	1878.9	1909.6	1934.5	1930.6
27.5°	1807.9	1819.9	1863.6	1897.9	1875.8
30°	1761.1	1755.1	1792.0	1822.7	1839.7
32.5°	1677.4	1698.9	1742.1	1772.4	1756.3
35°	1626.5	1631.4	1669.1	1707.7	1706.6
37.5°	1537.7	1560.1	1613.2	1624.0	1614.1
40°	1461.9	1484.3	1532.3	1543.9	1539.1
42.5°	1406.0	1410.0	1451.1	1464.5	1443.2
45°	1308.6	1333.0	1355.2	1390.1	1357.2
47.5°	1225.7	1237.1	1284.8	1294.1	1276.8
50°	1150.5	1154.5	1202.4	1190.8	1179.5
52.5°	1056.0	1072.7	1099.7	1097.4	1084.1
55°	978.2	971.7	997.2	990.4	990.1
57.5°	884.8	896.2	917.2	906.4	889.1
60°	797.4	797.7	805.3	793.1	790.8
62.5°	700.0	703.4	705.1	690.1	714.5
65°	600.9	593.0	616.3	592.7	596.7
67.5°	509.8	513.8	511.5	496.8	502.4
70°	417.3	422.4	418.7	402.0	407.1
72.5°	332.7	326.4	330.4	309.4	319.1
75°	250.1	245.0	249.5	231.9	239.9
77.5°	170.3	174.3	171.5	162.1	167.5
80°	112.4	109.3	109.3	103.9	105.0
82.5°	65.6	62.5	61.6	59.9	62.5
85°	30.7	29.8	30.4	29.5	28.4
87.5°	11.1	11.4	11.4	10.8	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)