

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: P589727

Luminaire Tested: **FMR-24-2-LD4-4LO-50-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589727
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-81-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

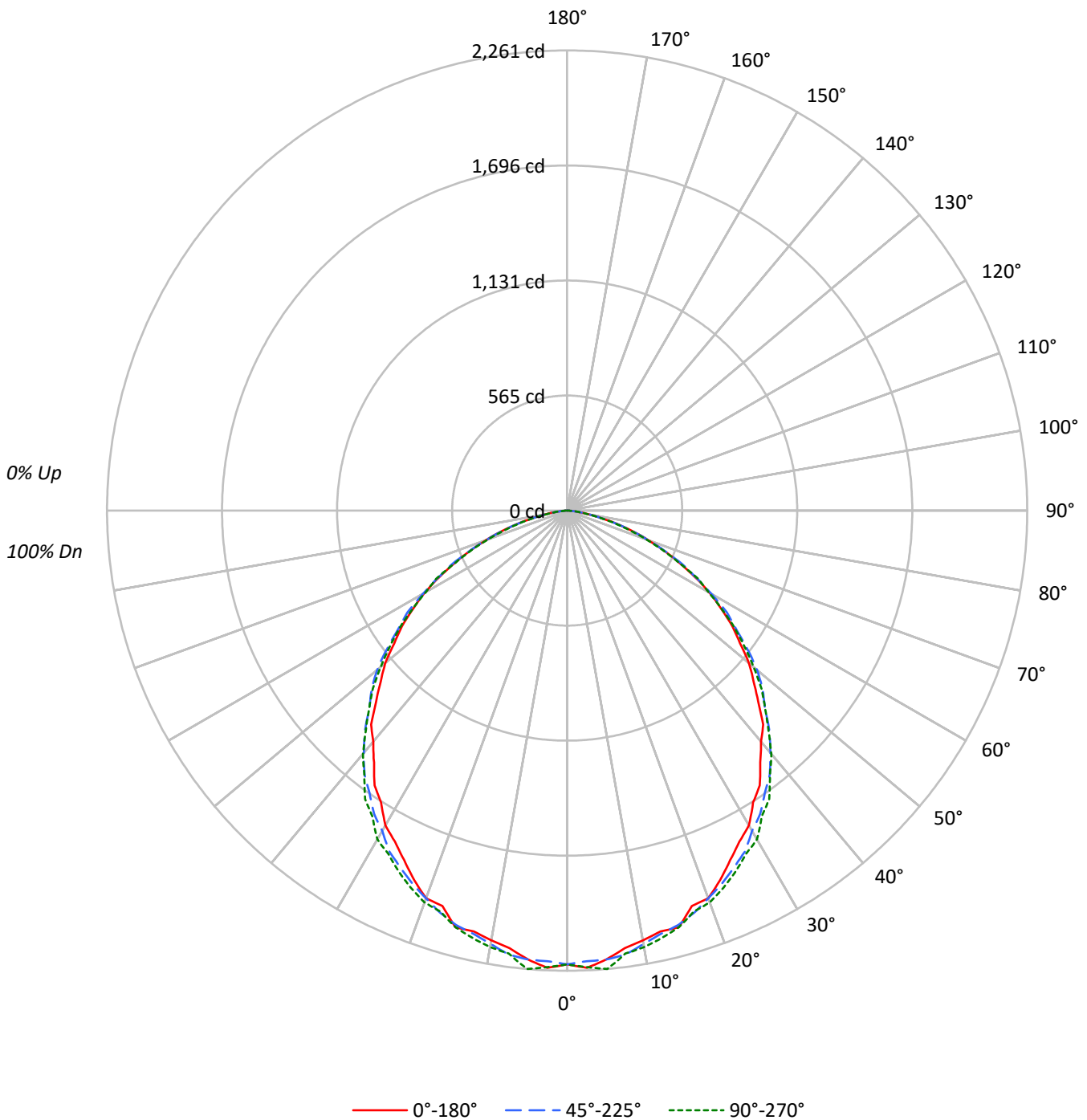
Lumens per Lamp: N/A
Luminaire Lumens: 5619.0 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6000	6000	6000
5°	5980	5982	6108
10°	5858	5910	5951
15°	5905	5873	5906
20°	5805	5805	5867
25°	5627	5749	5813
30°	5549	5647	5797
35°	5418	5560	5685
40°	5208	5459	5483
45°	5050	5230	5238
50°	4884	5105	5007
55°	4654	4745	4711
60°	4352	4395	4316
65°	3880	3979	3853
70°	3330	3341	3248
75°	2637	2630	2529
80°	1767	1717	1650
85°	960	951	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.7	3.7
10°-20°	594.4	10.6
20°-30°	890.5	15.8
30°-40°	1055.4	18.8
40°-50°	1057.4	18.8
50°-60°	897.5	16.0
60°-70°	605.1	10.8
70°-80°	265.9	4.7
80°-90°	43.2	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°	1694.5	30.2
0°-40°	2749.9	48.9
0°-60°	4704.8	83.7
0°-90°	5619.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5619.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2230	2230	2230	2230	2230	
5°	2214	2208	2214	2208	2261	209
15°	2120	2095	2108	2119	2120	591
25°	1895	1905	1936	1962	1958	876
35°	1649	1654	1693	1732	1731	1024
45°	1327	1352	1374	1410	1376	1027
55°	992	985	1011	1004	1004	882
65°	609	601	625	601	605	606
75°	254	248	253	235	243	272
85°	31	30	31	30	29	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2229.5	2229.5	2229.5	2229.5	2229.5
2.5°	2248.8	2231.8	2215.9	2234.4	2245.6
5°	2213.6	2208.5	2214.5	2207.9	2261.1
7.5°	2168.2	2188.0	2199.5	2192.3	2195.5
10°	2144.0	2137.1	2162.7	2180.5	2178.0
12.5°	2118.1	2128.4	2129.9	2149.2	2150.9
15°	2119.5	2095.0	2108.0	2118.9	2119.8
17.5°	2037.2	2063.7	2072.6	2097.6	2066.5
20°	2027.1	2007.8	2027.1	2052.7	2048.7
22.5°	1965.2	1943.6	1985.1	2007.8	2006.4
25°	1895.0	1905.3	1936.4	1961.8	1957.7
27.5°	1833.4	1845.5	1889.8	1924.6	1902.2
30°	1785.9	1779.8	1817.3	1848.4	1865.6
32.5°	1701.0	1722.8	1766.6	1797.4	1781.0
35°	1649.4	1654.3	1692.6	1731.8	1730.6
37.5°	1559.3	1582.1	1635.9	1646.8	1636.8
40°	1482.5	1505.2	1553.9	1565.7	1560.8
42.5°	1425.8	1429.8	1471.5	1485.1	1463.5
45°	1327.0	1351.8	1374.2	1409.7	1376.3
47.5°	1243.0	1254.5	1302.9	1312.4	1294.8
50°	1166.7	1170.7	1219.4	1207.6	1196.1
52.5°	1070.8	1087.8	1115.2	1112.9	1099.3
55°	992.0	985.3	1011.3	1004.3	1004.1
57.5°	897.3	908.8	930.1	919.1	901.6
60°	808.6	808.9	816.7	804.3	802.0
62.5°	709.9	713.3	715.0	699.8	724.5
65°	609.4	601.3	624.9	601.1	605.1
67.5°	517.0	521.0	518.7	503.8	509.5
70°	423.2	428.3	424.6	407.6	412.8
72.5°	337.4	331.0	335.1	313.8	323.6
75°	253.6	248.4	253.0	235.2	243.2
77.5°	172.7	176.7	173.9	164.4	169.8
80°	114.0	110.8	110.8	105.4	106.5
82.5°	66.5	63.3	62.5	60.7	63.3
85°	31.1	30.2	30.8	29.9	28.8
87.5°	11.2	11.5	11.5	10.9	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)