

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: P589505

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589505
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-LD4-3STD-40-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

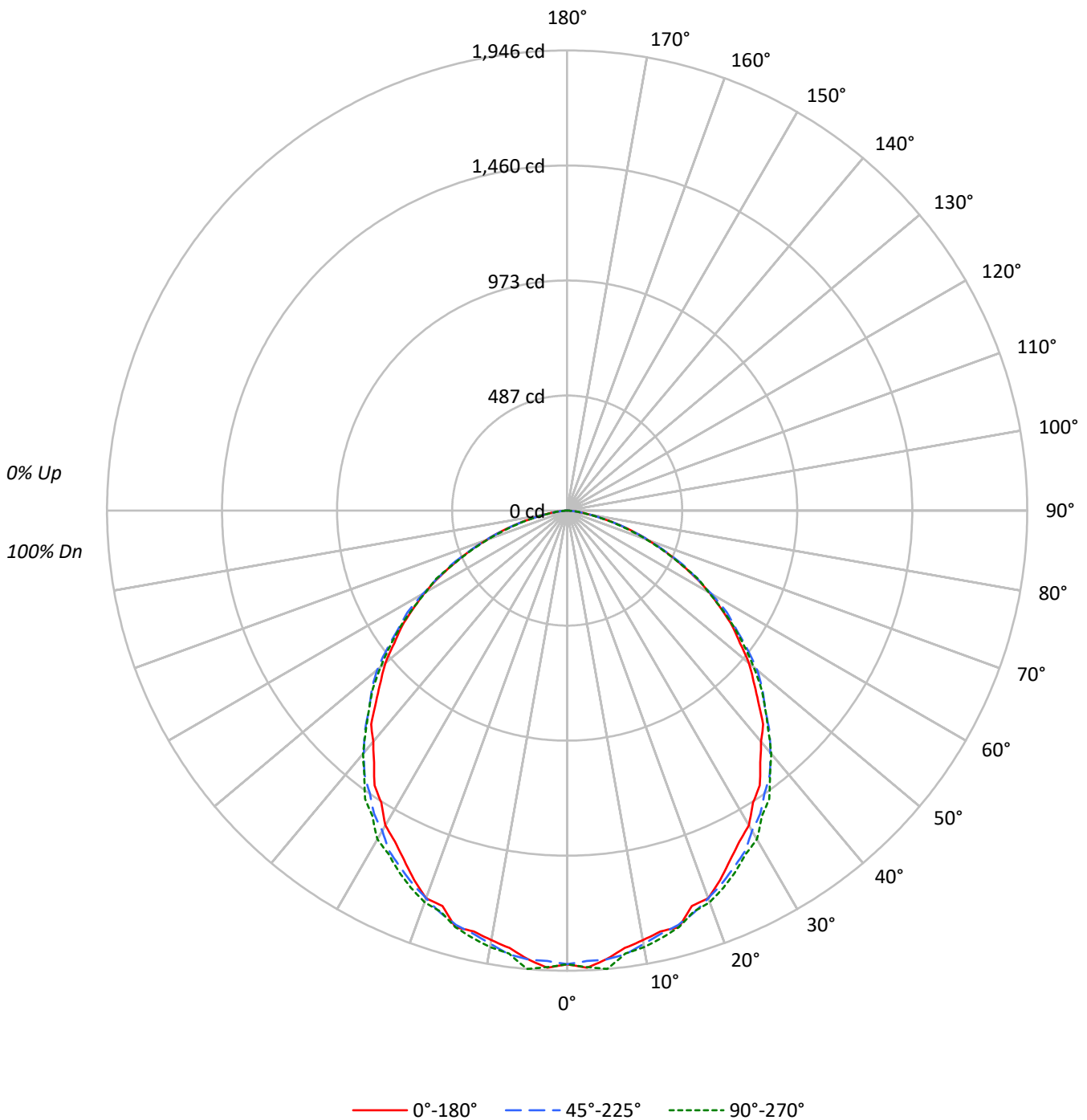
Lumens per Lamp: N/A
Luminaire Lumens: 4835.0 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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°	5162	5162	5162
5°	5145	5147	5256
10°	5041	5085	5121
15°	5081	5053	5081
20°	4995	4995	5048
25°	4842	4948	5002
30°	4775	4859	4988
35°	4663	4785	4892
40°	4481	4697	4718
45°	4346	4500	4507
50°	4203	4392	4309
55°	4005	4083	4054
60°	3745	3782	3714
65°	3339	3424	3316
70°	2865	2875	2795
75°	2269	2263	2176
80°	1520	1478	1420
85°	827	818	766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.5	3.7
10°-20°	511.4	10.6
20°-30°	766.2	15.8
30°-40°	908.1	18.8
40°-50°	909.8	18.8
50°-60°	772.3	16.0
60°-70°	520.7	10.8
70°-80°	228.8	4.7
80°-90°	37.2	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°	1458.1	30.2
0°-40°	2366.3	48.9
0°-60°	4048.4	83.7
0°-90°	4835.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4835.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1918	1918	1918	1918	1918	
5°	1905	1900	1906	1900	1946	180
15°	1824	1803	1814	1823	1824	508
25°	1631	1640	1666	1688	1685	754
35°	1419	1424	1456	1490	1489	881
45°	1142	1163	1182	1213	1184	883
55°	854	848	870	864	864	759
65°	524	517	538	517	521	522
75°	218	214	218	202	209	234
85°	27	26	26	26	25	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1918.4	1918.4	1918.4	1918.4	1918.4
2.5°	1935.0	1920.4	1906.8	1922.6	1932.3
5°	1904.8	1900.3	1905.5	1899.8	1945.7
7.5°	1865.6	1882.7	1892.6	1886.5	1889.2
10°	1844.8	1838.9	1860.9	1876.3	1874.1
12.5°	1822.5	1831.5	1832.7	1849.3	1850.8
15°	1823.8	1802.7	1813.9	1823.3	1824.0
17.5°	1752.9	1775.7	1783.4	1805.0	1778.2
20°	1744.3	1727.7	1744.3	1766.3	1762.9
22.5°	1691.0	1672.4	1708.1	1727.7	1726.4
25°	1630.6	1639.5	1666.3	1688.0	1684.6
27.5°	1577.6	1588.0	1626.1	1656.1	1636.8
30°	1536.7	1531.5	1563.7	1590.5	1605.3
32.5°	1463.6	1482.5	1520.1	1546.6	1532.5
35°	1419.3	1423.5	1456.5	1490.1	1489.1
37.5°	1341.8	1361.3	1407.7	1417.1	1408.4
40°	1275.6	1295.2	1337.1	1347.2	1343.0
42.5°	1226.8	1230.3	1266.2	1277.9	1259.3
45°	1141.9	1163.2	1182.5	1213.0	1184.2
47.5°	1069.6	1079.5	1121.1	1129.2	1114.1
50°	1003.9	1007.4	1049.2	1039.1	1029.2
52.5°	921.4	936.0	959.6	957.6	946.0
55°	853.6	847.9	870.2	864.2	864.0
57.5°	772.1	782.0	800.3	790.9	775.8
60°	695.8	696.0	702.7	692.1	690.1
62.5°	610.8	613.8	615.3	602.1	623.5
65°	524.4	517.4	537.7	517.2	520.7
67.5°	444.9	448.3	446.3	433.5	438.4
70°	364.1	368.6	365.4	350.7	355.2
72.5°	290.3	284.9	288.3	270.0	278.4
75°	218.2	213.8	217.7	202.4	209.3
77.5°	148.6	152.1	149.6	141.4	146.1
80°	98.1	95.4	95.4	90.7	91.6
82.5°	57.2	54.5	53.8	52.3	54.5
85°	26.8	26.0	26.5	25.8	24.8
87.5°	9.7	9.9	9.9	9.4	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)