

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: P589521

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-93-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589521
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-93-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

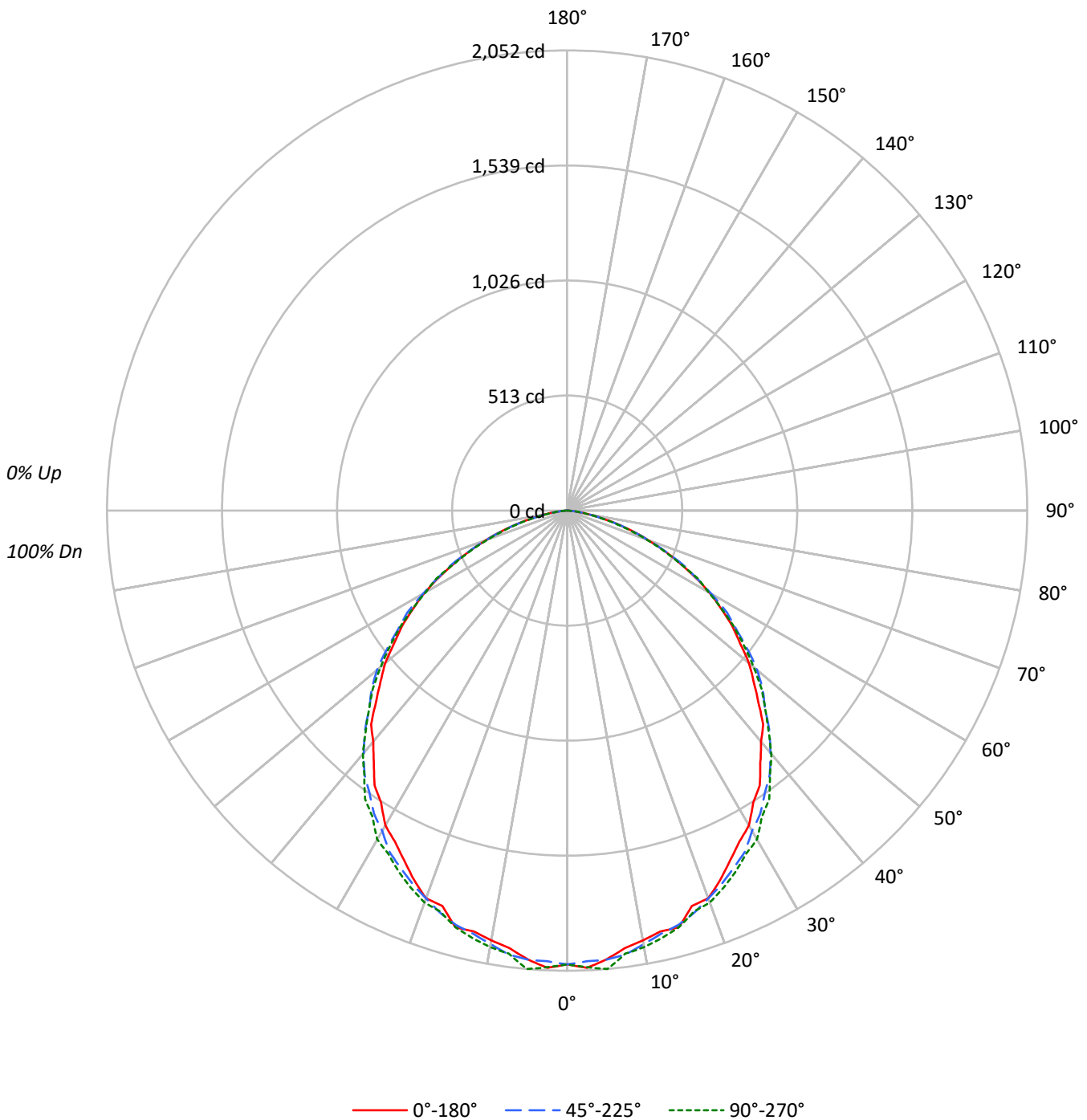
Lumens per Lamp: N/A
Luminaire Lumens: 5100.0 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5445	5445	5445
5°	5427	5430	5544
10°	5317	5364	5402
15°	5359	5330	5360
20°	5269	5269	5325
25°	5107	5219	5276
30°	5037	5125	5262
35°	4918	5047	5160
40°	4727	4954	4976
45°	4584	4747	4754
50°	4433	4633	4545
55°	4224	4306	4275
60°	3950	3989	3918
65°	3522	3612	3497
70°	3022	3032	2948
75°	2393	2388	2296
80°	1604	1559	1499
85°	871	865	806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.3	3.7
10°-20°	539.5	10.6
20°-30°	808.2	15.8
30°-40°	957.9	18.8
40°-50°	959.7	18.8
50°-60°	814.6	16.0
60°-70°	549.2	10.8
70°-80°	241.3	4.7
80°-90°	39.2	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°	1538.0	30.2
0°-40°	2496.0	48.9
0°-60°	4270.2	83.7
0°-90°	5100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2024	2024	2024	2024	2024	
5°	2009	2004	2010	2004	2052	189
15°	1924	1902	1913	1923	1924	536
25°	1720	1729	1758	1781	1777	795
35°	1497	1502	1536	1572	1571	930
45°	1204	1227	1247	1279	1249	932
55°	900	894	918	912	911	801
65°	553	546	567	546	549	550
75°	230	226	230	214	221	247
85°	28	27	28	27	26	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2023.6	2023.6	2023.6	2023.6	2023.6
2.5°	2041.1	2025.6	2011.3	2028.0	2038.2
5°	2009.2	2004.5	2010.0	2004.0	2052.3
7.5°	1967.9	1985.9	1996.4	1989.8	1992.7
10°	1946.0	1939.7	1962.9	1979.1	1976.8
12.5°	1922.4	1931.8	1933.2	1950.7	1952.2
15°	1923.7	1901.5	1913.3	1923.2	1924.0
17.5°	1849.0	1873.1	1881.2	1903.9	1875.7
20°	1839.9	1822.4	1839.9	1863.1	1859.5
22.5°	1783.7	1764.1	1801.7	1822.4	1821.1
25°	1720.0	1729.4	1757.6	1780.6	1776.9
27.5°	1664.0	1675.0	1715.3	1746.9	1726.5
30°	1620.9	1615.4	1649.4	1677.6	1693.3
32.5°	1543.9	1563.7	1603.4	1631.4	1616.5
35°	1497.1	1501.5	1536.3	1571.8	1570.8
37.5°	1415.3	1436.0	1484.8	1494.7	1485.6
40°	1345.6	1366.2	1410.3	1421.1	1416.6
42.5°	1294.1	1297.7	1335.6	1347.9	1328.3
45°	1204.5	1226.9	1247.3	1279.4	1249.1
47.5°	1128.2	1138.6	1182.5	1191.1	1175.2
50°	1058.9	1062.6	1106.7	1096.0	1085.6
52.5°	971.9	987.3	1012.2	1010.1	997.8
55°	900.3	894.3	917.8	911.6	911.3
57.5°	814.4	824.8	844.2	834.2	818.3
60°	733.9	734.2	741.2	730.0	727.9
62.5°	644.3	647.4	649.0	635.2	657.6
65°	553.1	545.8	567.2	545.5	549.2
67.5°	469.2	472.9	470.8	457.2	462.5
70°	384.1	388.8	385.4	370.0	374.7
72.5°	306.2	300.5	304.1	284.8	293.7
75°	230.2	225.5	229.7	213.5	220.8
77.5°	156.8	160.4	157.8	149.2	154.2
80°	103.5	100.6	100.6	95.6	96.7
82.5°	60.4	57.5	56.7	55.1	57.5
85°	28.2	27.4	28.0	27.2	26.1
87.5°	10.2	10.5	10.5	9.9	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)