

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: P589071

Luminaire Tested: **FMR-24-2-LD4-2HI-50-UNV-93-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589071
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-LD4-2HI-50-UNV-93-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

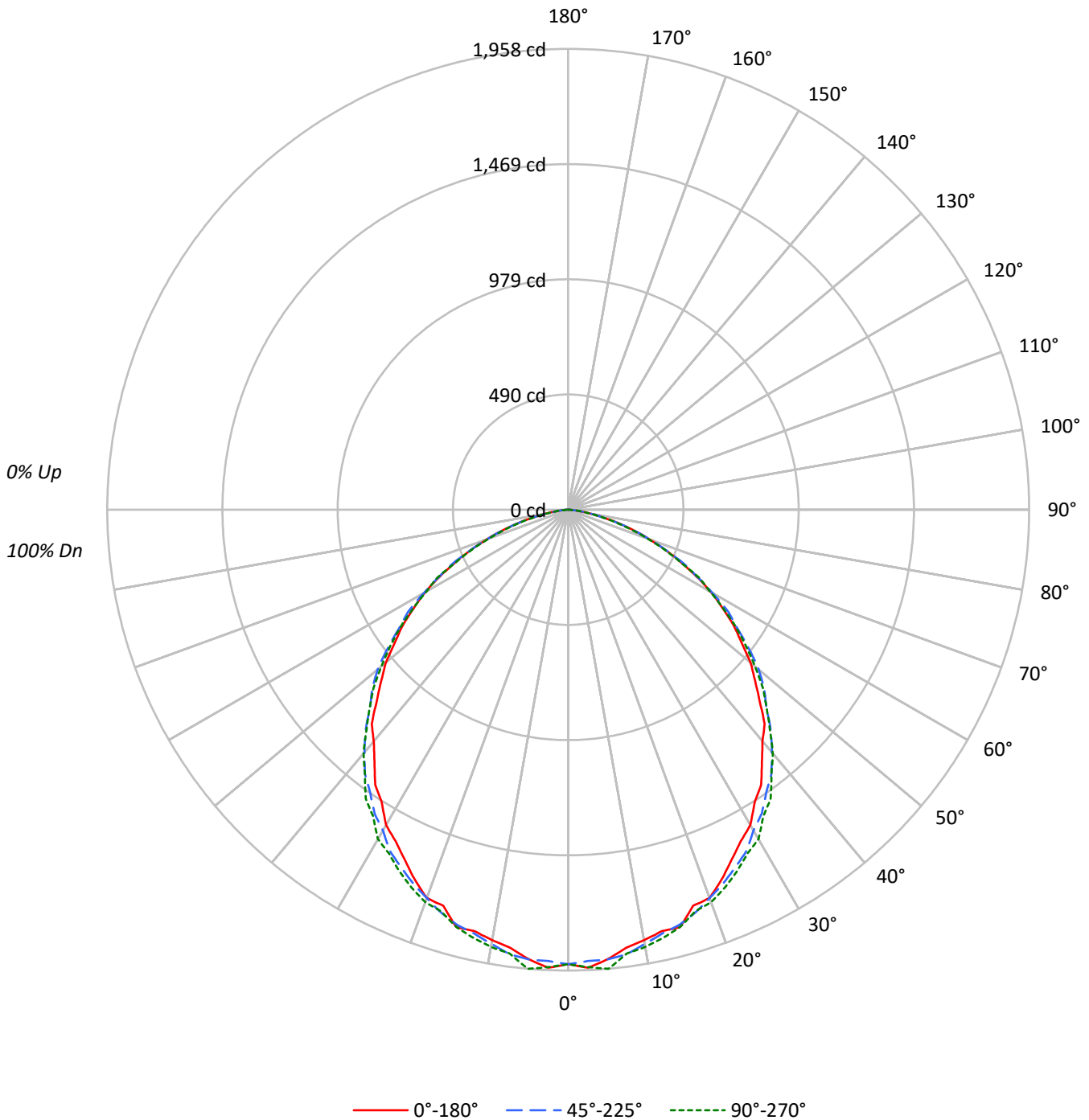
Lumens per Lamp: N/A
Luminaire Lumens: 4867.0 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	5197	5197	5197
5°	5179	5181	5290
10°	5075	5119	5155
15°	5115	5087	5115
20°	5028	5028	5082
25°	4874	4980	5035
30°	4807	4891	5021
35°	4693	4816	4924
40°	4511	4728	4749
45°	4374	4530	4537
50°	4231	4422	4337
55°	4031	4109	4080
60°	3770	3807	3738
65°	3361	3447	3337
70°	2884	2894	2813
75°	2284	2279	2191
80°	1530	1488	1430
85°	831	824	769



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.6	3.7
10°-20°	514.8	10.6
20°-30°	771.3	15.8
30°-40°	914.1	18.8
40°-50°	915.8	18.8
50°-60°	777.4	16.0
60°-70°	524.1	10.8
70°-80°	230.3	4.7
80°-90°	37.4	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°	1467.8	30.2
0°-40°	2381.9	48.9
0°-60°	4075.1	83.7
0°-90°	4867.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4867.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1931	1931	1931	1931	1931	
5°	1917	1913	1918	1912	1958	181
15°	1836	1815	1826	1835	1836	511
25°	1641	1650	1677	1699	1696	759
35°	1429	1433	1466	1500	1499	887
45°	1149	1171	1190	1221	1192	889
55°	859	854	876	870	870	764
65°	528	521	541	521	524	525
75°	220	215	219	204	211	235
85°	27	26	27	26	25	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1931.1	1931.1	1931.1	1931.1	1931.1
2.5°	1947.8	1933.1	1919.4	1935.3	1945.1
5°	1917.4	1912.9	1918.1	1912.4	1958.5
7.5°	1878.0	1895.2	1905.2	1898.9	1901.7
10°	1857.1	1851.1	1873.3	1888.7	1886.5
12.5°	1834.6	1843.6	1844.8	1861.5	1863.0
15°	1835.9	1814.7	1825.9	1835.4	1836.1
17.5°	1764.5	1787.5	1795.2	1816.9	1790.0
20°	1755.8	1739.1	1755.8	1778.0	1774.5
22.5°	1702.2	1683.5	1719.4	1739.1	1737.9
25°	1641.4	1650.4	1677.3	1699.2	1695.7
27.5°	1588.0	1598.5	1636.9	1667.1	1647.6
30°	1546.9	1541.6	1574.1	1601.0	1615.9
32.5°	1473.3	1492.3	1530.2	1556.9	1542.6
35°	1428.7	1432.9	1466.1	1500.0	1499.0
37.5°	1350.6	1370.3	1417.0	1426.4	1417.7
40°	1284.1	1303.8	1345.9	1356.1	1351.9
42.5°	1235.0	1238.4	1274.6	1286.3	1267.6
45°	1149.4	1170.9	1190.3	1221.0	1192.1
47.5°	1076.6	1086.6	1128.5	1136.7	1121.5
50°	1010.6	1014.0	1056.2	1046.0	1036.0
52.5°	927.5	942.2	965.9	963.9	952.2
55°	859.2	853.5	875.9	869.9	869.7
57.5°	777.2	787.2	805.6	796.1	780.9
60°	700.4	700.6	707.4	696.6	694.6
62.5°	614.9	617.9	619.3	606.1	627.6
65°	527.8	520.9	541.3	520.6	524.1
67.5°	447.8	451.3	449.3	436.3	441.3
70°	366.5	371.0	367.8	353.1	357.5
72.5°	292.2	286.7	290.2	271.8	280.3
75°	219.7	215.2	219.2	203.7	210.7
77.5°	149.6	153.1	150.6	142.4	147.1
80°	98.7	96.0	96.0	91.3	92.3
82.5°	57.6	54.9	54.1	52.6	54.9
85°	26.9	26.2	26.7	25.9	24.9
87.5°	9.7	10.0	10.0	9.5	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)