

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: P589037

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-93-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589037
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-40-UNV-93-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

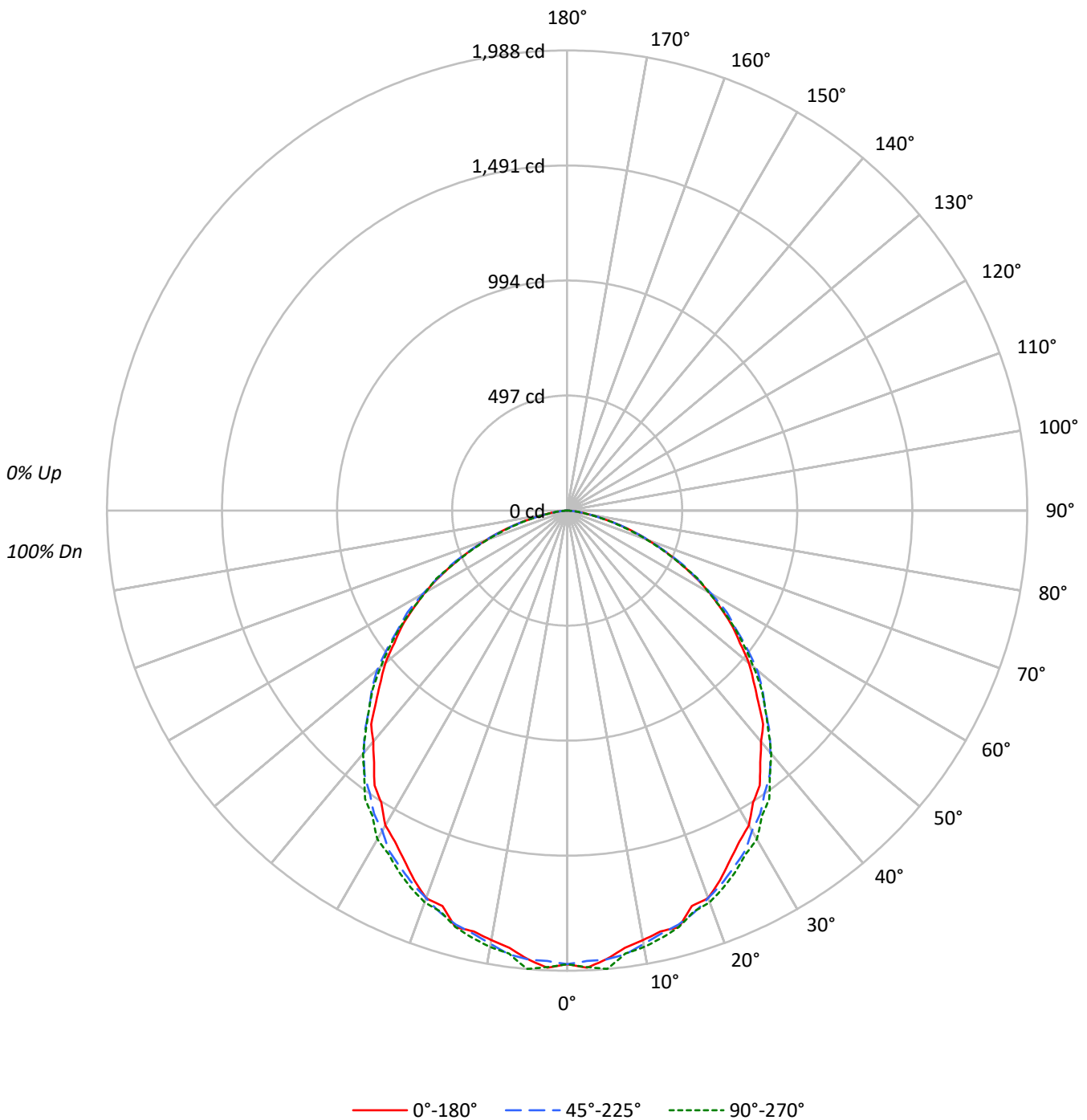
Lumens per Lamp: N/A
Luminaire Lumens: 4939.0 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5274	5274	5274
5°	5256	5258	5369
10°	5149	5194	5231
15°	5190	5162	5191
20°	5103	5103	5157
25°	4946	5054	5109
30°	4878	4963	5095
35°	4763	4888	4997
40°	4578	4798	4819
45°	4439	4597	4604
50°	4293	4487	4401
55°	4091	4170	4140
60°	3825	3863	3794
65°	3411	3498	3387
70°	2926	2936	2854
75°	2318	2312	2223
80°	1553	1509	1450
85°	843	837	781



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.3	3.7
10°-20°	522.4	10.6
20°-30°	782.7	15.8
30°-40°	927.7	18.8
40°-50°	929.4	18.8
50°-60°	788.9	16.0
60°-70°	531.9	10.8
70°-80°	233.7	4.7
80°-90°	38.0	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°	1489.5	30.2
0°-40°	2417.1	48.9
0°-60°	4135.4	83.7
0°-90°	4939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1960	1960	1960	1960	1960	
5°	1946	1941	1946	1941	1988	183
15°	1863	1842	1853	1862	1863	519
25°	1666	1675	1702	1724	1721	770
35°	1450	1454	1488	1522	1521	900
45°	1166	1188	1208	1239	1210	902
55°	872	866	889	883	882	776
65°	536	529	549	528	532	533
75°	223	218	222	207	214	239
85°	27	27	27	26	25	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1959.7	1959.7	1959.7	1959.7	1959.7
2.5°	1976.6	1961.7	1947.8	1964.0	1973.8
5°	1945.8	1941.2	1946.5	1940.7	1987.5
7.5°	1905.8	1923.2	1933.4	1927.0	1929.8
10°	1884.5	1878.4	1901.0	1916.7	1914.4
12.5°	1861.8	1870.9	1872.1	1889.1	1890.6
15°	1863.0	1841.5	1852.9	1862.5	1863.3
17.5°	1790.7	1813.9	1821.8	1843.8	1816.5
20°	1781.8	1764.8	1781.8	1804.3	1800.8
22.5°	1727.4	1708.4	1744.9	1764.8	1763.6
25°	1665.7	1674.8	1702.1	1724.4	1720.8
27.5°	1611.5	1622.1	1661.1	1691.7	1672.0
30°	1569.8	1564.4	1597.3	1624.7	1639.8
32.5°	1495.1	1514.3	1552.8	1579.9	1565.5
35°	1449.8	1454.1	1487.8	1522.2	1521.2
37.5°	1370.6	1390.6	1437.9	1447.5	1438.7
40°	1303.1	1323.1	1365.8	1376.2	1371.9
42.5°	1253.2	1256.8	1293.5	1305.4	1286.4
45°	1166.4	1188.2	1207.9	1239.1	1209.7
47.5°	1092.6	1102.7	1145.2	1153.5	1138.1
50°	1025.5	1029.0	1071.8	1061.4	1051.3
52.5°	941.2	956.2	980.2	978.2	966.3
55°	871.9	866.1	888.9	882.8	882.5
57.5°	788.7	798.8	817.5	807.9	792.5
60°	710.7	711.0	717.8	706.9	704.9
62.5°	624.0	627.0	628.5	615.1	636.9
65°	535.7	528.6	549.3	528.3	531.9
67.5°	454.4	458.0	455.9	442.8	447.9
70°	371.9	376.5	373.2	358.3	362.8
72.5°	296.5	291.0	294.5	275.8	284.4
75°	222.9	218.4	222.4	206.7	213.8
77.5°	151.8	155.4	152.8	144.5	149.3
80°	100.2	97.4	97.4	92.6	93.6
82.5°	58.4	55.7	54.9	53.4	55.7
85°	27.3	26.6	27.1	26.3	25.3
87.5°	9.9	10.1	10.1	9.6	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)