

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: P589070

Luminaire Tested: **FMR-24-2-LD4-2HI-50-UNV-93-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589070
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-93-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

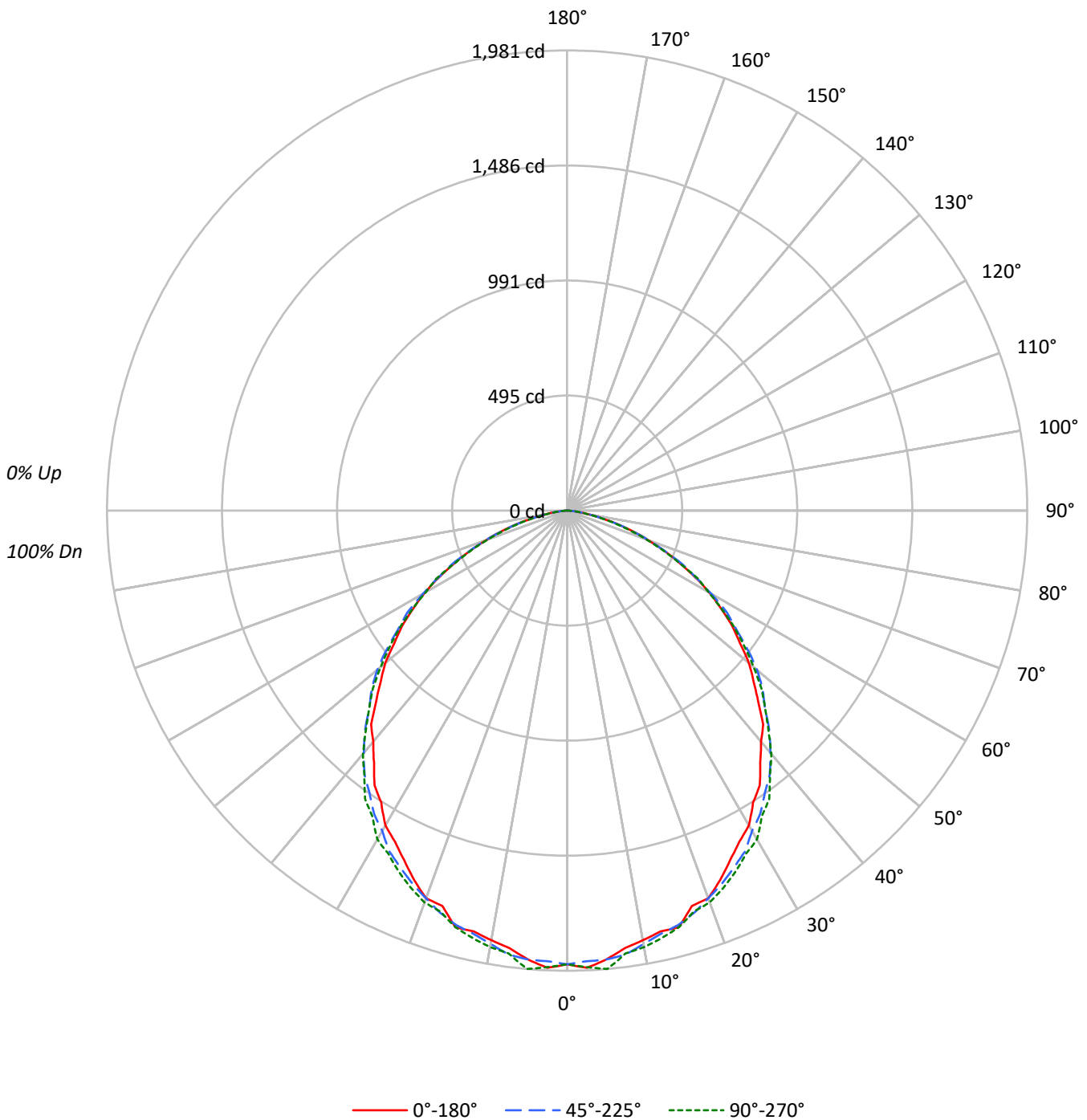
Lumens per Lamp: N/A
Luminaire Lumens: 4923.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5256	5256	5256
5°	5239	5241	5351
10°	5133	5178	5214
15°	5173	5145	5174
20°	5086	5086	5140
25°	4930	5037	5093
30°	4862	4947	5079
35°	4747	4872	4981
40°	4563	4782	4804
45°	4425	4582	4589
50°	4279	4472	4387
55°	4077	4157	4127
60°	3813	3851	3781
65°	3400	3486	3375
70°	2917	2927	2846
75°	2310	2305	2216
80°	1548	1505	1446
85°	840	834	778



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.7	3.7
10°-20°	520.7	10.6
20°-30°	780.2	15.8
30°-40°	924.7	18.8
40°-50°	926.4	18.8
50°-60°	786.3	16.0
60°-70°	530.2	10.8
70°-80°	233.0	4.7
80°-90°	37.9	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°	1484.7	30.2
0°-40°	2409.3	48.9
0°-60°	4122.0	83.7
0°-90°	4923.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4923.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1953	1953	1953	1953	1953	
5°	1940	1935	1940	1934	1981	183
15°	1857	1836	1847	1856	1857	517
25°	1660	1669	1697	1719	1715	768
35°	1445	1449	1483	1517	1516	897
45°	1163	1184	1204	1235	1206	899
55°	869	863	886	880	880	773
65°	534	527	548	527	530	531
75°	222	218	222	206	213	238
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°	1953.3	1953.3	1953.3	1953.3	1953.3
2.5°	1970.2	1955.3	1941.5	1957.6	1967.4
5°	1939.5	1934.9	1940.2	1934.4	1981.1
7.5°	1899.6	1917.0	1927.1	1920.8	1923.6
10°	1878.4	1872.4	1894.8	1910.4	1908.2
12.5°	1855.7	1864.8	1866.1	1883.0	1884.5
15°	1857.0	1835.5	1846.9	1856.5	1857.2
17.5°	1784.8	1808.1	1815.9	1837.8	1810.6
20°	1776.0	1759.1	1776.0	1798.5	1794.9
22.5°	1721.8	1702.9	1739.2	1759.1	1757.9
25°	1660.3	1669.3	1696.6	1718.8	1715.2
27.5°	1606.3	1616.9	1655.7	1686.2	1666.6
30°	1564.7	1559.4	1592.2	1619.4	1634.5
32.5°	1490.3	1509.4	1547.8	1574.8	1560.4
35°	1445.1	1449.4	1483.0	1517.3	1516.3
37.5°	1366.2	1386.1	1433.3	1442.9	1434.0
40°	1298.9	1318.8	1361.4	1371.7	1367.5
42.5°	1249.2	1252.7	1289.3	1301.1	1282.2
45°	1162.7	1184.4	1204.0	1235.0	1205.8
47.5°	1089.0	1099.1	1141.5	1149.8	1134.4
50°	1022.2	1025.7	1068.3	1058.0	1047.9
52.5°	938.2	953.1	977.0	975.0	963.2
55°	869.1	863.3	886.0	879.9	879.7
57.5°	786.1	796.2	814.9	805.3	789.9
60°	708.4	708.7	715.5	704.7	702.6
62.5°	621.9	625.0	626.5	613.1	634.8
65°	533.9	526.9	547.5	526.6	530.1
67.5°	453.0	456.5	454.5	441.4	446.4
70°	370.7	375.3	372.0	357.1	361.7
72.5°	295.6	290.0	293.6	274.9	283.5
75°	222.2	217.7	221.7	206.1	213.1
77.5°	151.3	154.9	152.3	144.0	148.8
80°	99.9	97.1	97.1	92.3	93.3
82.5°	58.3	55.5	54.7	53.2	55.5
85°	27.2	26.5	27.0	26.2	25.2
87.5°	9.8	10.1	10.1	9.6	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)