

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: P589520

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-93-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589520
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-93-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

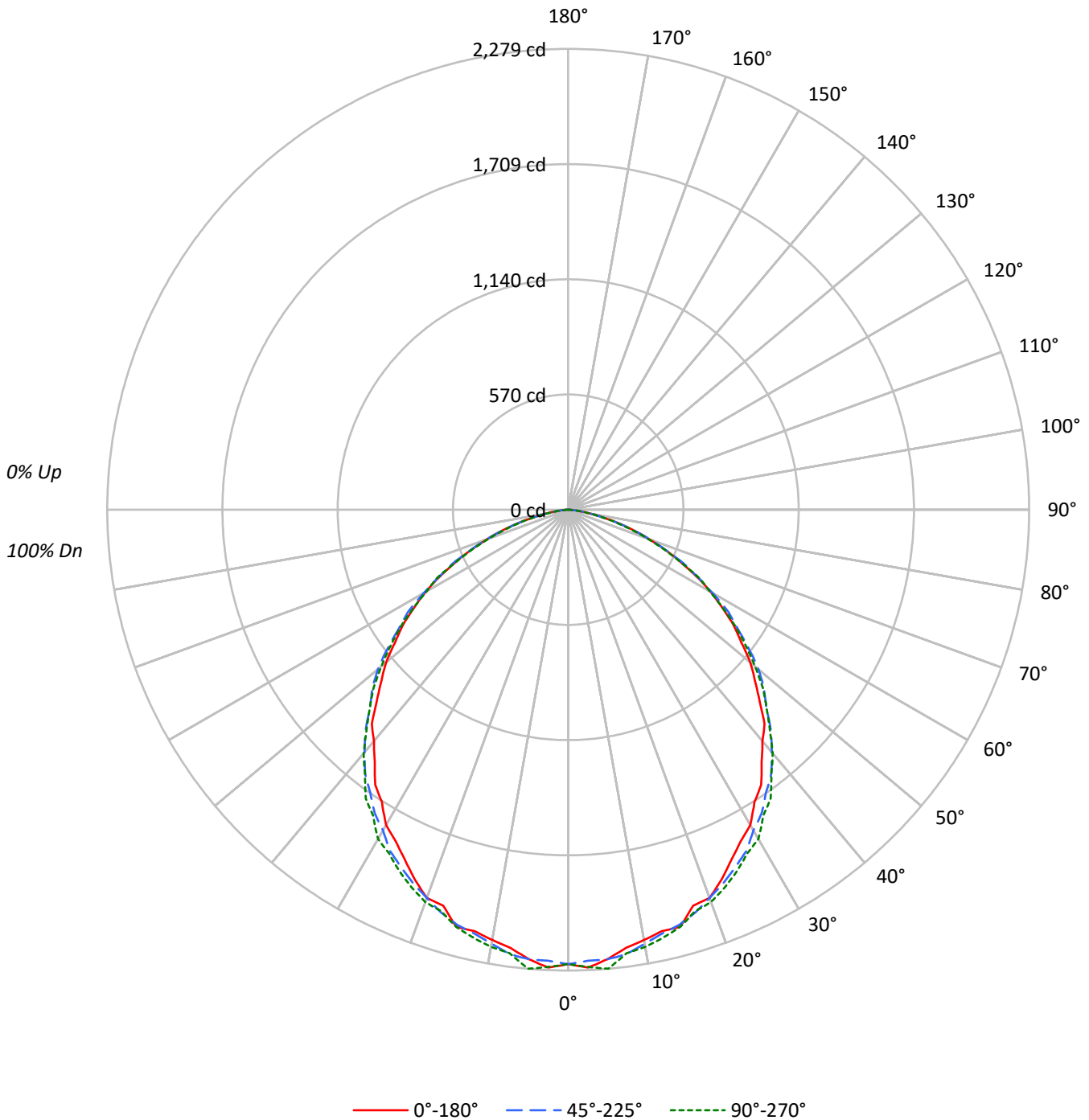
Lumens per Lamp: N/A
Luminaire Lumens: 5663.0 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6046	6046	6046
5°	6027	6029	6156
10°	5904	5956	5998
15°	5951	5919	5952
20°	5850	5850	5913
25°	5671	5795	5858
30°	5593	5691	5842
35°	5461	5604	5730
40°	5249	5501	5526
45°	5090	5271	5278
50°	4922	5145	5046
55°	4690	4782	4747
60°	4386	4430	4350
65°	3911	4010	3883
70°	3356	3367	3273
75°	2658	2651	2548
80°	1781	1731	1663
85°	966	957	895



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.4	3.7
10°-20°	599.0	10.6
20°-30°	897.4	15.8
30°-40°	1063.7	18.8
40°-50°	1065.6	18.8
50°-60°	904.5	16.0
60°-70°	609.8	10.8
70°-80°	268.0	4.7
80°-90°	43.5	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°	1707.8	30.2
0°-40°	2771.5	48.9
0°-60°	4741.6	83.7
0°-90°	5663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5663.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2247	2247	2247	2247	2247	
5°	2231	2226	2232	2225	2279	210
15°	2136	2112	2124	2136	2136	595
25°	1910	1920	1952	1977	1973	883
35°	1662	1667	1706	1745	1744	1032
45°	1337	1362	1385	1421	1387	1035
55°	1000	993	1019	1012	1012	889
65°	614	606	630	606	610	611
75°	256	250	255	237	245	274
85°	31	30	31	30	29	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2246.9	2246.9	2246.9	2246.9	2246.9
2.5°	2266.4	2249.3	2233.3	2251.9	2263.2
5°	2231.0	2225.8	2231.8	2225.2	2278.8
7.5°	2185.1	2205.2	2216.8	2209.5	2212.7
10°	2160.8	2153.8	2179.6	2197.6	2195.0
12.5°	2134.7	2145.1	2146.6	2166.0	2167.7
15°	2136.1	2111.5	2124.5	2135.5	2136.4
17.5°	2053.1	2079.8	2088.8	2114.1	2082.7
20°	2043.0	2023.5	2043.0	2068.8	2064.7
22.5°	1980.6	1958.9	2000.6	2023.5	2022.1
25°	1909.8	1920.3	1951.6	1977.1	1973.1
27.5°	1847.7	1859.9	1904.6	1939.7	1917.1
30°	1799.9	1793.8	1831.5	1862.8	1880.2
32.5°	1714.3	1736.3	1780.4	1811.5	1794.9
35°	1662.4	1667.3	1705.9	1745.3	1744.2
37.5°	1571.5	1594.5	1648.7	1659.7	1649.6
40°	1494.1	1517.0	1566.0	1577.9	1573.0
42.5°	1436.9	1441.0	1483.1	1496.7	1474.9
45°	1337.4	1362.4	1385.0	1420.7	1387.0
47.5°	1252.7	1264.3	1313.1	1322.6	1304.9
50°	1175.8	1179.9	1228.9	1217.0	1205.4
52.5°	1079.2	1096.3	1123.9	1121.6	1107.9
55°	999.7	993.1	1019.2	1012.2	1011.9
57.5°	904.3	915.9	937.4	926.3	908.6
60°	814.9	815.2	823.1	810.6	808.3
62.5°	715.4	718.9	720.6	705.3	730.2
65°	614.2	606.0	629.8	605.8	609.8
67.5°	521.0	525.1	522.8	507.7	513.5
70°	426.5	431.7	427.9	410.8	416.0
72.5°	340.0	333.6	337.7	316.2	326.1
75°	255.6	250.4	255.0	237.0	245.1
77.5°	174.1	178.1	175.2	165.7	171.2
80°	114.9	111.7	111.7	106.2	107.3
82.5°	67.0	63.8	63.0	61.2	63.8
85°	31.3	30.5	31.0	30.2	29.0
87.5°	11.3	11.6	11.6	11.0	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)