

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: P589503

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589503
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-81-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

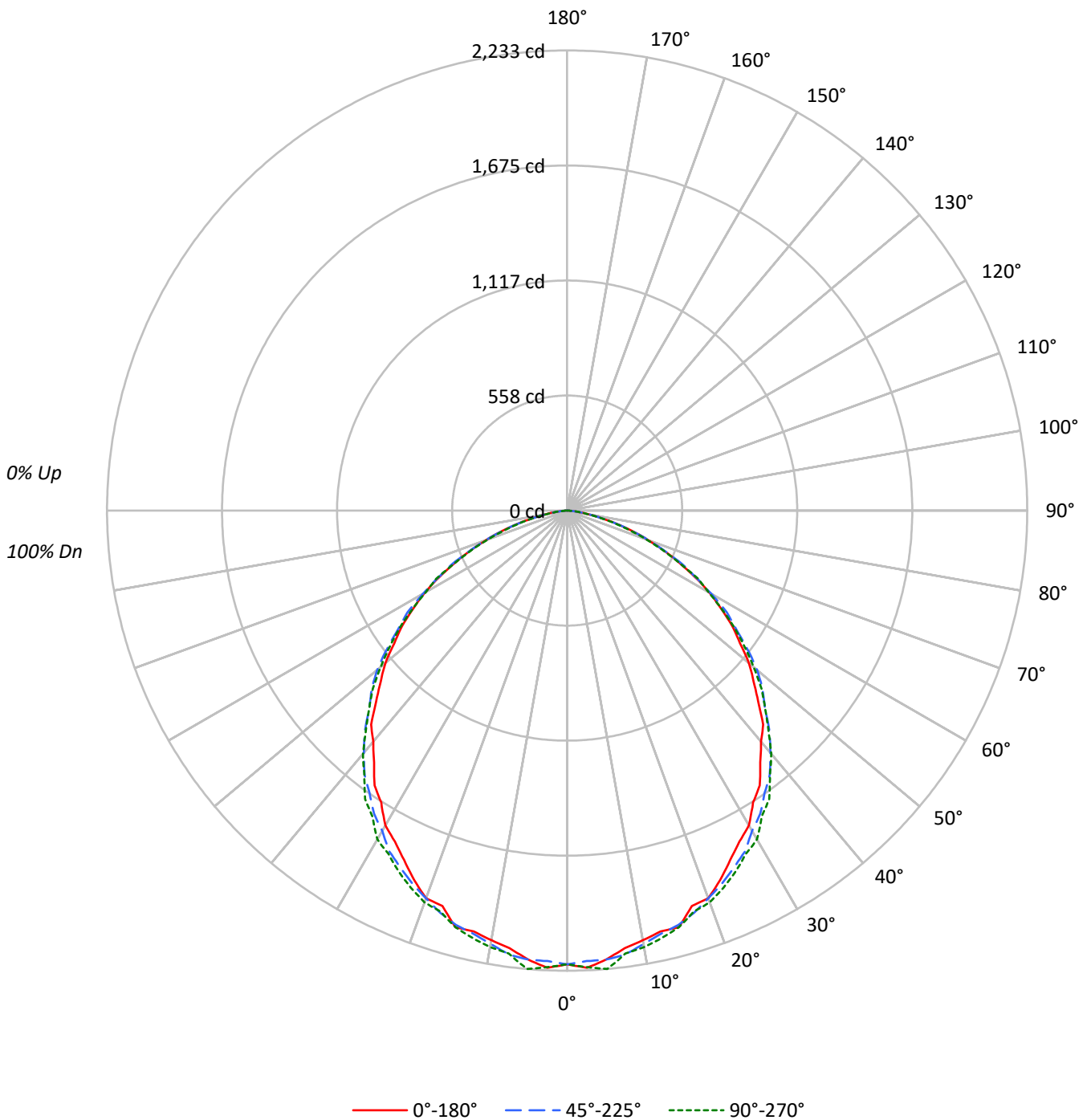
Lumens per Lamp: N/A
Luminaire Lumens: 5549.0 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5925	5925	5925
5°	5905	5907	6032
10°	5786	5836	5877
15°	5831	5799	5832
20°	5733	5733	5794
25°	5556	5678	5740
30°	5480	5576	5725
35°	5351	5491	5615
40°	5143	5390	5414
45°	4987	5165	5172
50°	4824	5041	4945
55°	4596	4685	4652
60°	4297	4341	4263
65°	3832	3930	3805
70°	3288	3299	3207
75°	2603	2598	2497
80°	1745	1695	1630
85°	948	939	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.1	3.7
10°-20°	587.0	10.6
20°-30°	879.4	15.8
30°-40°	1042.2	18.8
40°-50°	1044.2	18.8
50°-60°	886.3	16.0
60°-70°	597.6	10.8
70°-80°	262.6	4.7
80°-90°	42.7	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°	1673.4	30.2
0°-40°	2715.7	48.9
0°-60°	4646.2	83.7
0°-90°	5549.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5549.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2202	2202	2202	2202	2202	
5°	2186	2181	2187	2180	2233	206
15°	2093	2069	2082	2092	2093	583
25°	1871	1882	1912	1937	1933	865
35°	1629	1634	1672	1710	1709	1011
45°	1310	1335	1357	1392	1359	1014
55°	980	973	999	992	992	871
65°	602	594	617	594	598	599
75°	250	245	250	232	240	268
85°	31	30	30	30	28	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2201.7	2201.7	2201.7	2201.7	2201.7
2.5°	2220.7	2204.0	2188.3	2206.5	2217.6
5°	2186.1	2181.0	2186.9	2180.4	2233.0
7.5°	2141.2	2160.8	2172.1	2165.0	2168.2
10°	2117.3	2110.5	2135.8	2153.4	2150.8
12.5°	2091.7	2101.9	2103.3	2122.4	2124.1
15°	2093.1	2068.9	2081.7	2092.5	2093.4
17.5°	2011.8	2038.0	2046.8	2071.5	2040.8
20°	2001.9	1982.8	2001.9	2027.2	2023.2
22.5°	1940.7	1919.4	1960.4	1982.8	1981.4
25°	1871.4	1881.6	1912.3	1937.3	1933.3
27.5°	1810.5	1822.5	1866.3	1900.7	1878.5
30°	1763.6	1757.7	1794.6	1825.3	1842.4
32.5°	1679.8	1701.4	1744.6	1775.0	1758.8
35°	1628.9	1633.7	1671.5	1710.2	1709.1
37.5°	1539.9	1562.4	1615.5	1626.3	1616.4
40°	1464.0	1486.5	1534.5	1546.2	1541.3
42.5°	1408.0	1412.0	1453.2	1466.6	1445.2
45°	1310.5	1335.0	1357.1	1392.1	1359.1
47.5°	1227.5	1238.9	1286.6	1296.0	1278.7
50°	1152.2	1156.1	1204.2	1192.5	1181.2
52.5°	1057.5	1074.3	1101.3	1099.0	1085.6
55°	979.6	973.1	998.7	991.8	991.5
57.5°	886.1	897.5	918.5	907.7	890.3
60°	798.5	798.8	806.5	794.3	792.0
62.5°	701.0	704.4	706.1	691.1	715.5
65°	601.8	593.8	617.2	593.6	597.5
67.5°	510.6	514.5	512.3	497.5	503.2
70°	417.9	423.0	419.3	402.5	407.6
72.5°	333.2	326.9	330.9	309.9	319.5
75°	250.4	245.3	249.9	232.3	240.2
77.5°	170.6	174.5	171.7	162.3	167.7
80°	112.6	109.4	109.4	104.0	105.2
82.5°	65.7	62.5	61.7	60.0	62.5
85°	30.7	29.8	30.4	29.6	28.4
87.5°	11.1	11.4	11.4	10.8	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)