

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: P589502

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589502
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-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

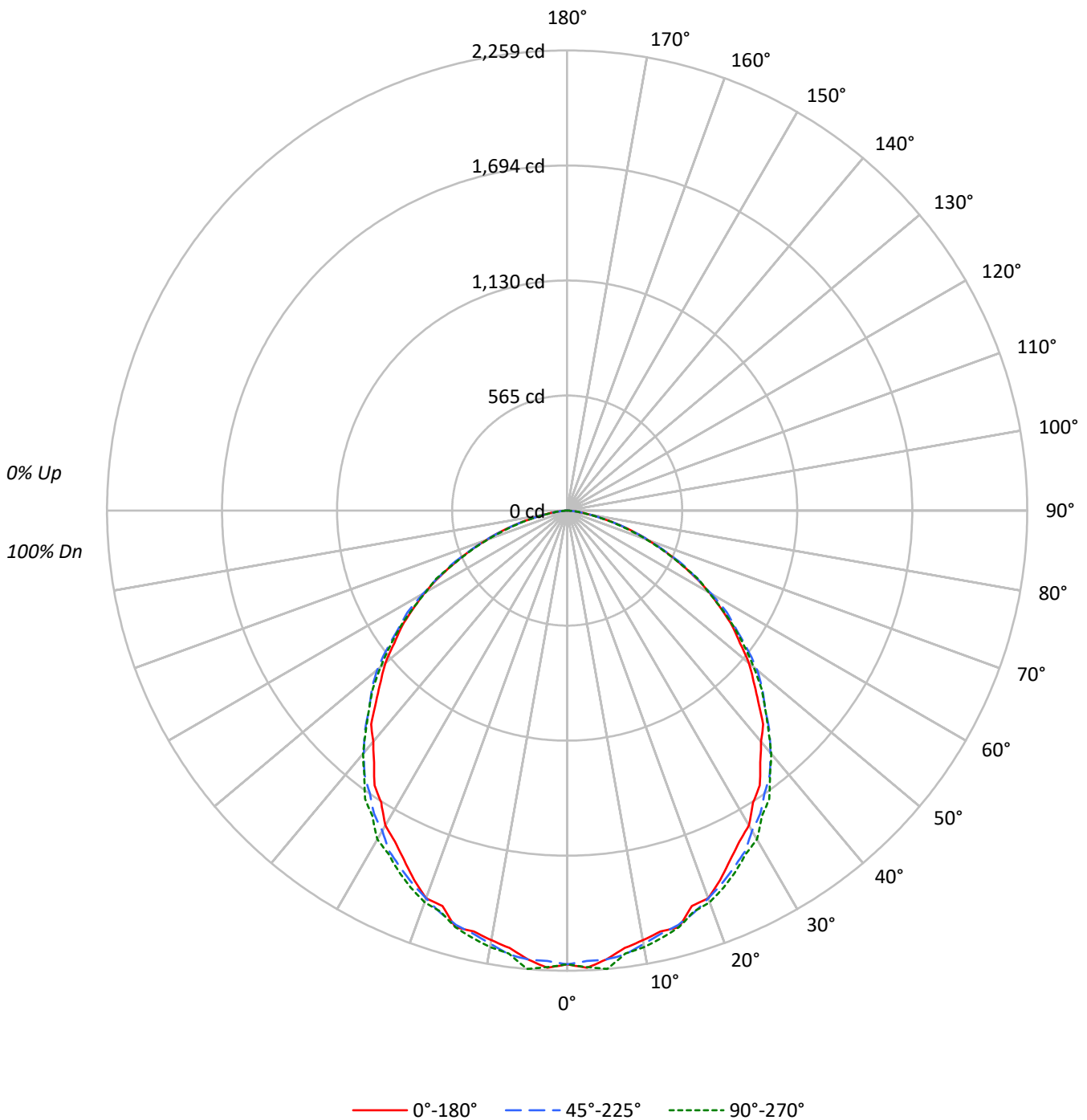
Lumens per Lamp: N/A
Luminaire Lumens: 5613.0 lumens
Efficiency: N/A
Efficacy: 112.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5993	5993	5993
5°	5973	5975	6101
10°	5852	5903	5945
15°	5899	5866	5899
20°	5799	5799	5861
25°	5621	5744	5807
30°	5543	5641	5791
35°	5413	5554	5679
40°	5202	5453	5477
45°	5045	5224	5232
50°	4879	5099	5002
55°	4649	4739	4706
60°	4347	4391	4311
65°	3876	3975	3848
70°	3326	3337	3245
75°	2634	2628	2527
80°	1765	1715	1649
85°	960	951	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.5	3.7
10°-20°	593.7	10.6
20°-30°	889.5	15.8
30°-40°	1054.3	18.8
40°-50°	1056.2	18.8
50°-60°	896.6	16.0
60°-70°	604.5	10.8
70°-80°	265.6	4.7
80°-90°	43.2	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°	1692.7	30.2
0°-40°	2747.0	48.9
0°-60°	4699.8	83.7
0°-90°	5613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5613.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2227	2227	2227	2227	2227	
5°	2211	2206	2212	2206	2259	208
15°	2117	2093	2106	2117	2118	590
25°	1893	1903	1934	1960	1956	875
35°	1648	1653	1691	1730	1729	1023
45°	1326	1350	1373	1408	1375	1025
55°	991	984	1010	1003	1003	881
65°	609	601	624	600	604	605
75°	253	248	253	235	243	271
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°	2227.1	2227.1	2227.1	2227.1	2227.1
2.5°	2246.4	2229.4	2213.6	2232.0	2243.2
5°	2211.3	2206.1	2212.1	2205.5	2258.7
7.5°	2165.8	2185.7	2197.2	2190.0	2193.2
10°	2141.7	2134.8	2160.4	2178.2	2175.6
12.5°	2115.8	2126.2	2127.6	2146.9	2148.6
15°	2117.3	2092.8	2105.7	2116.7	2117.5
17.5°	2035.0	2061.5	2070.4	2095.4	2064.3
20°	2024.9	2005.7	2024.9	2050.5	2046.5
22.5°	1963.1	1941.6	1983.0	2005.7	2004.2
25°	1893.0	1903.3	1934.4	1959.7	1955.6
27.5°	1831.4	1843.5	1887.8	1922.6	1900.1
30°	1784.0	1777.9	1815.3	1846.4	1863.6
32.5°	1699.1	1721.0	1764.7	1795.5	1779.1
35°	1647.7	1652.6	1690.8	1729.9	1728.8
37.5°	1557.7	1580.4	1634.2	1645.1	1635.0
40°	1480.9	1503.6	1552.2	1564.0	1559.1
42.5°	1424.2	1428.3	1470.0	1483.5	1461.9
45°	1325.6	1350.3	1372.8	1408.1	1374.8
47.5°	1241.7	1253.2	1301.5	1311.0	1293.4
50°	1165.5	1169.5	1218.1	1206.3	1194.8
52.5°	1069.7	1086.7	1114.0	1111.7	1098.2
55°	990.9	984.3	1010.2	1003.3	1003.0
57.5°	896.3	907.8	929.1	918.2	900.6
60°	807.7	808.0	815.8	803.4	801.1
62.5°	709.1	712.6	714.3	699.0	723.8
65°	608.7	600.7	624.3	600.4	604.4
67.5°	516.4	520.5	518.2	503.2	509.0
70°	422.7	427.9	424.1	407.2	412.4
72.5°	337.0	330.7	334.7	313.4	323.2
75°	253.3	248.2	252.8	234.9	243.0
77.5°	172.5	176.6	173.7	164.2	169.7
80°	113.9	110.7	110.7	105.2	106.4
82.5°	66.4	63.3	62.4	60.7	63.3
85°	31.1	30.2	30.8	29.9	28.8
87.5°	11.2	11.5	11.5	10.9	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)