

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: P589675

Luminaire Tested: **FMR-24-2-LD4-4LO-35-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589675
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-LD4-4LO-35-UNV-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

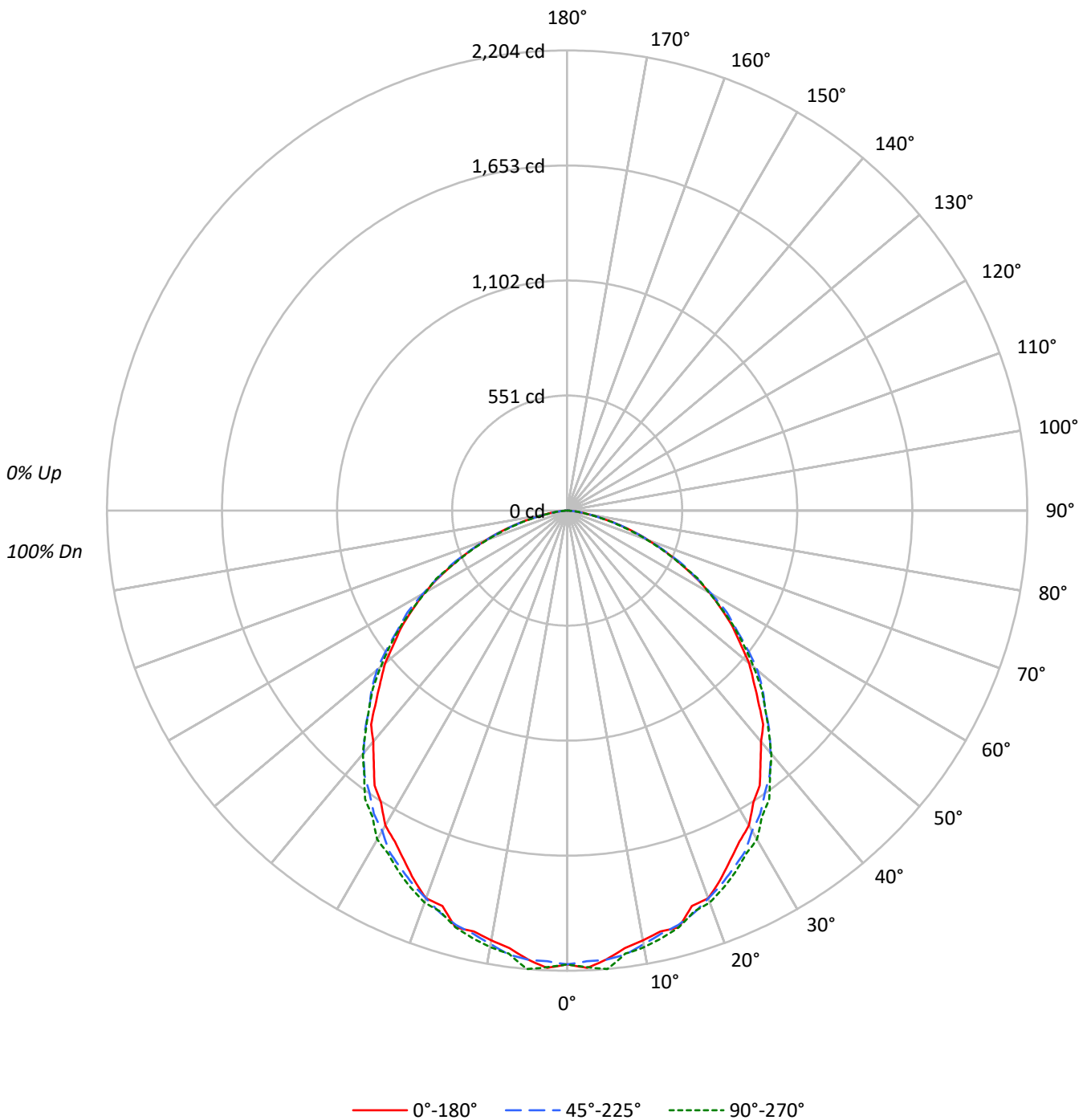
Lumens per Lamp: N/A
Luminaire Lumens: 5478.0 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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																		
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	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°	5849	5849	5849
5°	5830	5832	5955
10°	5711	5761	5802
15°	5757	5725	5757
20°	5659	5659	5720
25°	5485	5605	5667
30°	5410	5505	5652
35°	5282	5421	5543
40°	5077	5322	5345
45°	4923	5099	5106
50°	4762	4977	4881
55°	4537	4625	4593
60°	4243	4285	4208
65°	3783	3880	3756
70°	3246	3257	3166
75°	2570	2565	2465
80°	1722	1674	1609
85°	936	926	868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.5	3.7
10°-20°	579.4	10.6
20°-30°	868.1	15.8
30°-40°	1028.9	18.8
40°-50°	1030.8	18.8
50°-60°	875.0	16.0
60°-70°	589.9	10.8
70°-80°	259.2	4.7
80°-90°	42.1	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°	1652.0	30.2
0°-40°	2680.9	48.9
0°-60°	4586.7	83.7
0°-90°	5478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5478.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2174	2174	2174	2174	2174	
5°	2158	2153	2159	2152	2204	203
15°	2066	2042	2055	2066	2067	576
25°	1847	1858	1888	1912	1909	854
35°	1608	1613	1650	1688	1687	998
45°	1294	1318	1340	1374	1342	1001
55°	967	961	986	979	979	860
65°	594	586	609	586	590	591
75°	247	242	247	229	237	265
85°	30	30	30	29	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2173.5	2173.5	2173.5	2173.5	2173.5
2.5°	2192.3	2175.8	2160.3	2178.3	2189.2
5°	2158.1	2153.0	2158.9	2152.5	2204.4
7.5°	2113.8	2133.1	2144.3	2137.3	2140.4
10°	2090.2	2083.4	2108.4	2125.8	2123.3
12.5°	2064.9	2075.0	2076.4	2095.2	2096.9
15°	2066.3	2042.5	2055.1	2065.8	2066.6
17.5°	1986.1	2011.9	2020.6	2045.0	2014.7
20°	1976.2	1957.4	1976.2	2001.2	1997.3
22.5°	1915.9	1894.9	1935.3	1957.4	1956.0
25°	1847.4	1857.5	1887.8	1912.5	1908.6
27.5°	1787.4	1799.2	1842.4	1876.3	1854.4
30°	1741.1	1735.2	1771.7	1802.0	1818.8
32.5°	1658.3	1679.6	1722.3	1752.3	1736.3
35°	1608.0	1612.8	1650.1	1688.3	1687.2
37.5°	1520.2	1542.4	1594.9	1605.5	1595.7
40°	1445.3	1467.4	1514.9	1526.4	1521.6
42.5°	1390.0	1393.9	1434.6	1447.8	1426.8
45°	1293.7	1317.9	1339.8	1374.3	1341.7
47.5°	1211.8	1223.0	1270.2	1279.4	1262.3
50°	1137.4	1141.3	1188.8	1177.3	1166.0
52.5°	1044.0	1060.5	1087.2	1084.9	1071.8
55°	967.1	960.6	985.9	979.1	978.9
57.5°	874.7	886.0	906.7	896.1	879.0
60°	788.3	788.6	796.2	784.1	781.9
62.5°	692.1	695.4	697.1	682.2	706.4
65°	594.1	586.3	609.3	586.0	589.9
67.5°	504.0	508.0	505.7	491.1	496.7
70°	412.5	417.6	413.9	397.4	402.4
72.5°	328.9	322.7	326.7	305.9	315.4
75°	247.2	242.2	246.7	229.3	237.1
77.5°	168.4	172.3	169.5	160.2	165.6
80°	111.1	108.0	108.0	102.7	103.8
82.5°	64.8	61.7	60.9	59.2	61.7
85°	30.3	29.5	30.0	29.2	28.1
87.5°	10.9	11.2	11.2	10.7	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)