

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: P588961

Luminaire Tested: **FMR-24-2-LD4-1STD-50-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P588961
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-LD4-1STD-50-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

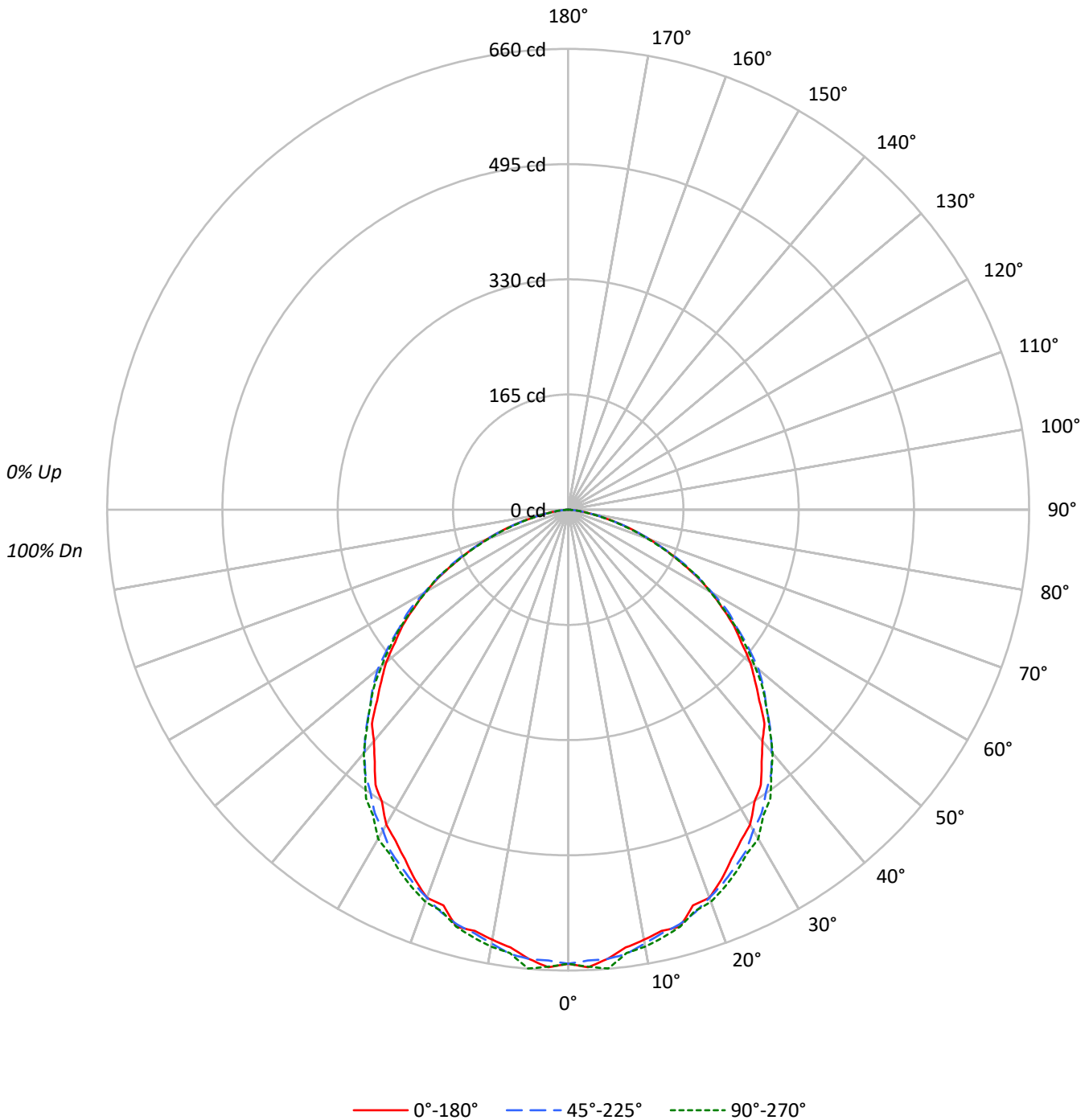
Lumens per Lamp: N/A
Luminaire Lumens: 1639.0 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	1750	1750	1750
5°	1744	1745	1782
10°	1709	1724	1736
15°	1722	1713	1723
20°	1693	1693	1711
25°	1641	1677	1696
30°	1619	1647	1691
35°	1580	1622	1658
40°	1519	1592	1599
45°	1473	1526	1528
50°	1425	1489	1461
55°	1357	1384	1374
60°	1270	1282	1259
65°	1132	1161	1124
70°	971	974	947
75°	769	767	738
80°	516	501	482
85°	281	278	259



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	3.7
10°-20°	173.4	10.6
20°-30°	259.7	15.8
30°-40°	307.8	18.8
40°-50°	308.4	18.8
50°-60°	261.8	16.0
60°-70°	176.5	10.8
70°-80°	77.6	4.7
80°-90°	12.6	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°	494.3	30.2
0°-40°	802.1	48.9
0°-60°	1372.4	83.7
0°-90°	1639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	650	650	650	650	650	
5°	646	644	646	644	660	61
15°	618	611	615	618	618	172
25°	553	556	565	572	571	256
35°	481	483	494	505	505	299
45°	387	394	401	411	401	299
55°	289	287	295	293	293	257
65°	178	175	182	175	176	177
75°	74	72	74	69	71	79
85°	9	9	9	9	8	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	650.3	650.3	650.3	650.3	650.3
2.5°	655.9	651.0	646.4	651.7	655.0
5°	645.7	644.2	645.9	644.0	659.6
7.5°	632.4	638.2	641.6	639.5	640.4
10°	625.4	623.4	630.8	636.0	635.3
12.5°	617.8	620.8	621.3	626.9	627.4
15°	618.2	611.1	614.9	618.1	618.3
17.5°	594.2	601.9	604.6	611.9	602.8
20°	591.3	585.7	591.3	598.8	597.6
22.5°	573.2	566.9	579.0	585.7	585.2
25°	552.7	555.8	564.8	572.2	571.1
27.5°	534.8	538.3	551.2	561.4	554.8
30°	520.9	519.2	530.1	539.1	544.2
32.5°	496.2	502.5	515.3	524.3	519.5
35°	481.1	482.6	493.7	505.1	504.8
37.5°	454.8	461.5	477.2	480.4	477.4
40°	432.4	439.1	453.2	456.7	455.3
42.5°	415.9	417.1	429.2	433.2	426.9
45°	387.1	394.3	400.9	411.2	401.4
47.5°	362.6	365.9	380.0	382.8	377.7
50°	340.3	341.5	355.7	352.2	348.9
52.5°	312.4	317.3	325.3	324.6	320.7
55°	289.3	287.4	295.0	293.0	292.9
57.5°	261.7	265.1	271.3	268.1	263.0
60°	235.9	235.9	238.2	234.6	233.9
62.5°	207.1	208.1	208.6	204.1	211.3
65°	177.8	175.4	182.3	175.3	176.5
67.5°	150.8	152.0	151.3	146.9	148.6
70°	123.4	124.9	123.8	118.9	120.4
72.5°	98.4	96.6	97.7	91.5	94.4
75°	74.0	72.5	73.8	68.6	71.0
77.5°	50.4	51.6	50.7	47.9	49.5
80°	33.3	32.3	32.3	30.7	31.1
82.5°	19.4	18.5	18.2	17.7	18.5
85°	9.1	8.8	9.0	8.7	8.4
87.5°	3.3	3.4	3.4	3.2	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)