

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: P588897

Luminaire Tested: **FMR-24-2-LD4-1STD-35-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P588897
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

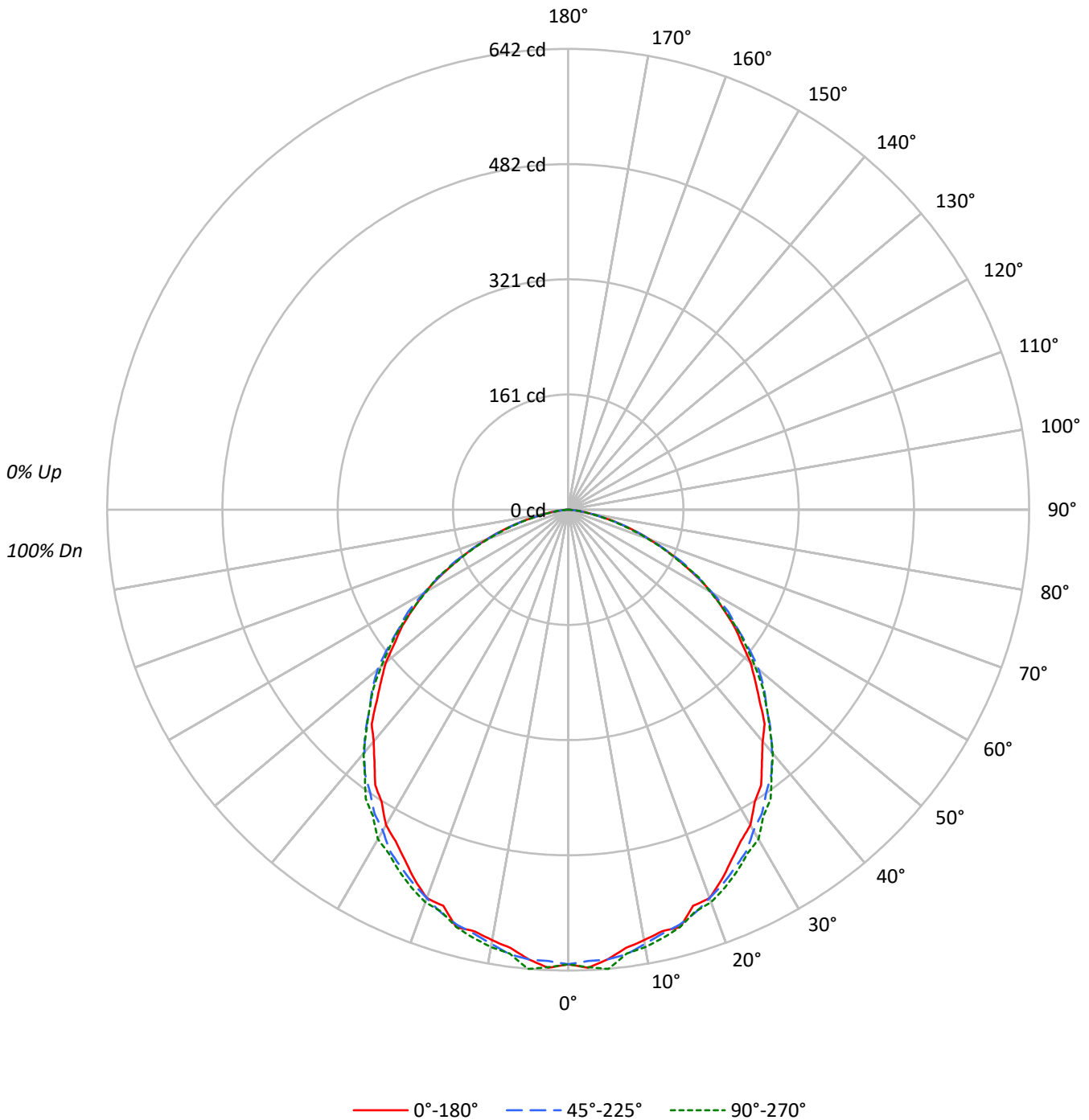
Lumens per Lamp: N/A
Luminaire Lumens: 1596.0 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	1704	1704	1704
5°	1699	1699	1735
10°	1664	1679	1690
15°	1677	1668	1677
20°	1649	1649	1666
25°	1598	1633	1651
30°	1576	1604	1647
35°	1539	1579	1615
40°	1479	1551	1557
45°	1434	1485	1488
50°	1387	1450	1422
55°	1322	1347	1338
60°	1236	1249	1226
65°	1102	1130	1095
70°	946	949	922
75°	749	748	718
80°	502	488	470
85°	272	269	253



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.6	3.7
10°-20°	168.8	10.6
20°-30°	252.9	15.8
30°-40°	299.8	18.8
40°-50°	300.3	18.8
50°-60°	254.9	16.0
60°-70°	171.9	10.8
70°-80°	75.5	4.7
80°-90°	12.3	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°	481.3	30.2
0°-40°	781.1	48.9
0°-60°	1336.4	83.7
0°-90°	1596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1596.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	629	627	629	627	642	59
15°	602	595	599	602	602	168
25°	538	541	550	557	556	249
35°	468	470	481	492	492	291
45°	377	384	390	400	391	292
55°	282	280	287	285	285	251
65°	173	171	178	171	172	172
75°	72	71	72	67	69	77
85°	9	9	9	8	8	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	633.3	633.3	633.3	633.3	633.3
2.5°	638.7	633.9	629.4	634.6	637.8
5°	628.8	627.3	629.0	627.1	642.2
7.5°	615.8	621.5	624.7	622.7	623.6
10°	609.0	607.0	614.3	619.4	618.6
12.5°	601.6	604.6	605.0	610.4	610.9
15°	602.0	595.1	598.7	601.9	602.1
17.5°	578.6	586.2	588.7	595.8	587.0
20°	575.8	570.3	575.8	583.1	581.9
22.5°	558.2	552.1	563.8	570.3	569.9
25°	538.2	541.2	550.0	557.2	556.1
27.5°	520.7	524.2	536.8	546.7	540.3
30°	507.3	505.5	516.2	525.0	529.9
32.5°	483.1	489.4	501.8	510.5	505.9
35°	468.5	469.9	480.8	491.9	491.6
37.5°	442.9	449.4	464.7	467.8	464.9
40°	421.1	427.5	441.4	444.7	443.3
42.5°	405.0	406.1	418.0	421.8	415.7
45°	376.9	384.0	390.3	400.4	390.9
47.5°	353.1	356.3	370.1	372.8	367.8
50°	331.4	332.5	346.3	343.0	339.7
52.5°	304.2	309.0	316.7	316.1	312.3
55°	281.8	279.9	287.2	285.3	285.2
57.5°	254.9	258.1	264.2	261.1	256.1
60°	229.7	229.8	232.0	228.4	227.8
62.5°	201.6	202.6	203.1	198.8	205.8
65°	173.1	170.8	177.5	170.7	171.9
67.5°	146.8	148.0	147.3	143.1	144.7
70°	120.2	121.7	120.6	115.8	117.2
72.5°	95.8	94.0	95.2	89.1	91.9
75°	72.0	70.6	71.9	66.8	69.1
77.5°	49.1	50.2	49.4	46.7	48.2
80°	32.4	31.5	31.5	29.9	30.3
82.5°	18.9	18.0	17.7	17.3	18.0
85°	8.8	8.6	8.7	8.5	8.2
87.5°	3.2	3.3	3.3	3.1	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)