

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: P588929

Luminaire Tested: **FMR-24-2-LD4-1STD-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P588929
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

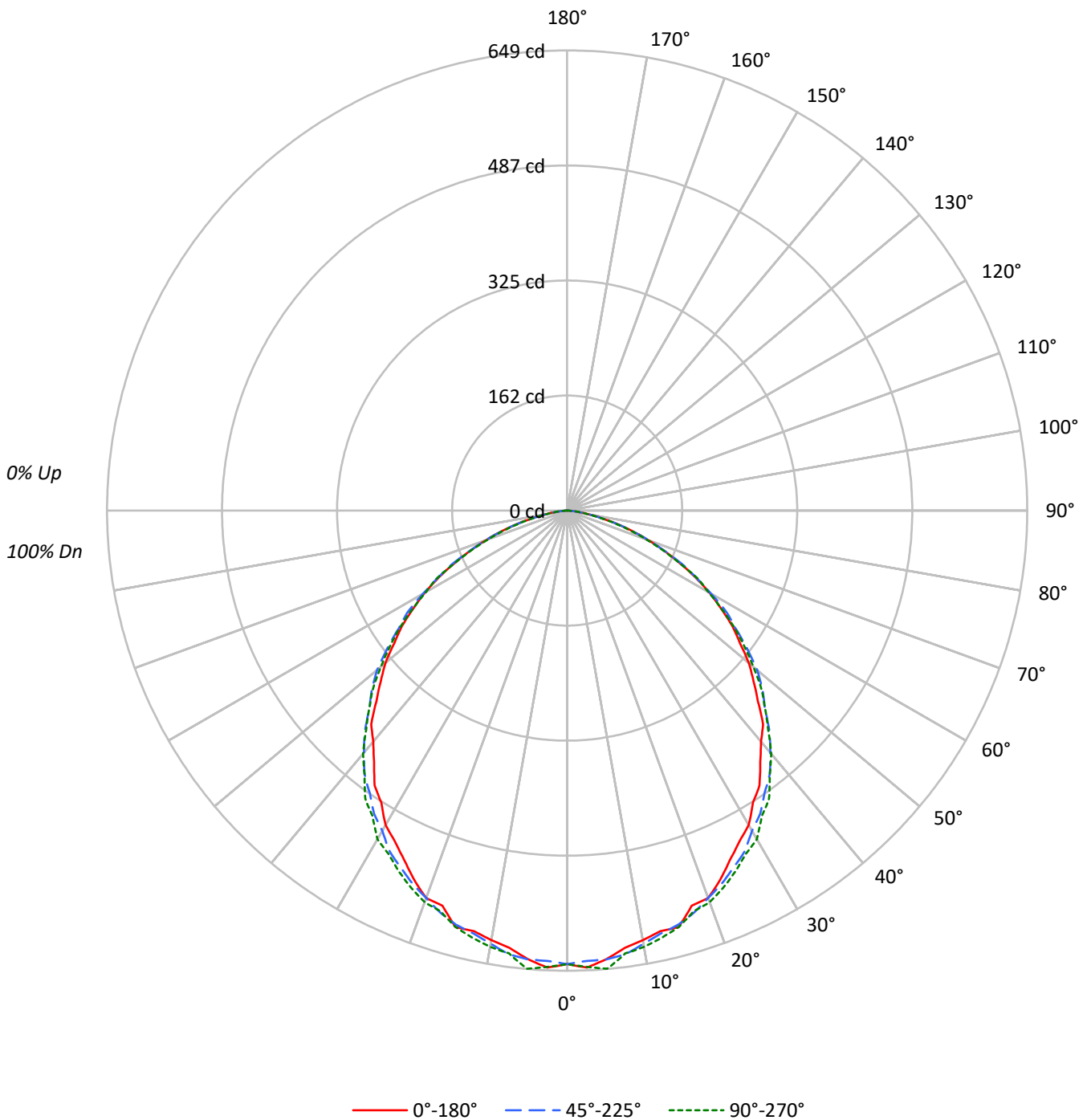
Lumens per Lamp: N/A
Luminaire Lumens: 1612.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1721	1721	1721
5°	1716	1716	1752
10°	1681	1695	1707
15°	1694	1685	1694
20°	1665	1665	1683
25°	1614	1649	1667
30°	1592	1620	1663
35°	1554	1595	1631
40°	1494	1566	1573
45°	1449	1500	1502
50°	1401	1464	1436
55°	1335	1361	1351
60°	1249	1261	1238
65°	1113	1142	1105
70°	955	958	932
75°	757	755	726
80°	507	493	474
85°	275	272	256



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.2	3.7
10°-20°	170.5	10.6
20°-30°	255.5	15.8
30°-40°	302.8	18.8
40°-50°	303.3	18.8
50°-60°	257.5	16.0
60°-70°	173.6	10.8
70°-80°	76.3	4.7
80°-90°	12.4	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°	486.1	30.2
0°-40°	788.9	48.9
0°-60°	1349.7	83.7
0°-90°	1612.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1612.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	640	640	640	640	640	
5°	635	634	635	633	649	60
15°	608	601	605	608	608	169
25°	544	547	556	563	562	251
35°	473	475	486	497	496	294
45°	381	388	394	404	395	294
55°	285	283	290	288	288	253
65°	175	172	179	172	174	174
75°	73	71	73	68	70	78
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°	639.6	639.6	639.6	639.6	639.6
2.5°	645.1	640.3	635.7	641.0	644.2
5°	635.1	633.6	635.3	633.4	648.7
7.5°	622.0	627.7	631.0	628.9	629.9
10°	615.1	613.1	620.4	625.6	624.8
12.5°	607.6	610.6	611.0	616.6	617.1
15°	608.1	601.0	604.8	607.9	608.1
17.5°	584.4	592.0	594.6	601.8	592.9
20°	581.5	576.0	581.5	588.9	587.7
22.5°	563.8	557.6	569.5	576.0	575.6
25°	543.6	546.6	555.5	562.8	561.6
27.5°	526.0	529.4	542.2	552.1	545.7
30°	512.3	510.6	521.3	530.3	535.2
32.5°	488.0	494.3	506.8	515.6	510.9
35°	473.2	474.6	485.6	496.8	496.5
37.5°	447.3	453.9	469.3	472.5	469.6
40°	425.3	431.8	445.8	449.2	447.8
42.5°	409.0	410.2	422.2	426.0	419.8
45°	380.7	387.8	394.2	404.4	394.8
47.5°	356.6	359.9	373.8	376.5	371.5
50°	334.7	335.9	349.8	346.4	343.1
52.5°	307.2	312.1	319.9	319.3	315.4
55°	284.6	282.7	290.1	288.1	288.0
57.5°	257.4	260.7	266.8	263.7	258.6
60°	232.0	232.1	234.3	230.7	230.1
62.5°	203.6	204.6	205.1	200.8	207.9
65°	174.8	172.5	179.3	172.4	173.6
67.5°	148.3	149.5	148.8	144.5	146.2
70°	121.4	122.9	121.8	116.9	118.4
72.5°	96.8	95.0	96.1	90.0	92.8
75°	72.8	71.3	72.6	67.5	69.8
77.5°	49.5	50.7	49.9	47.2	48.7
80°	32.7	31.8	31.8	30.2	30.6
82.5°	19.1	18.2	17.9	17.4	18.2
85°	8.9	8.7	8.8	8.6	8.3
87.5°	3.2	3.3	3.3	3.1	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)