

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: P589093

Luminaire Tested: **FMR-24-2-LD4-2LO-35-UNV-82-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589093
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-LD4-2LO-35-UNV-82-84-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

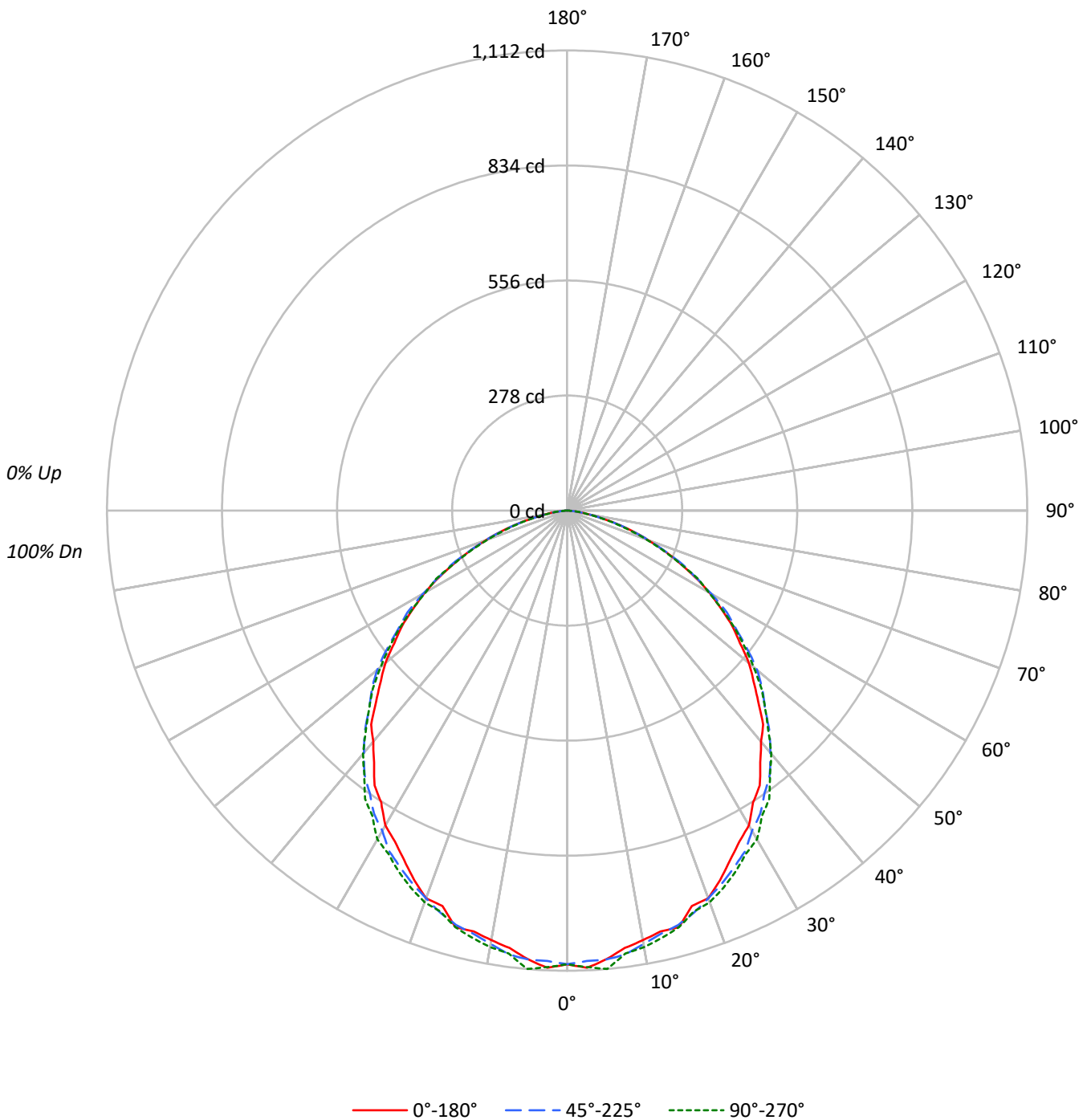
Lumens per Lamp: N/A
Luminaire Lumens: 2763.0 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2950	2950	2950
5°	2940	2941	3004
10°	2881	2906	2926
15°	2903	2888	2904
20°	2855	2855	2885
25°	2767	2827	2858
30°	2729	2777	2851
35°	2665	2734	2796
40°	2561	2684	2696
45°	2483	2571	2575
50°	2402	2510	2462
55°	2289	2333	2316
60°	2140	2161	2123
65°	1908	1957	1894
70°	1637	1643	1597
75°	1297	1293	1243
80°	869	845	812
85°	472	466	438



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.1	3.7
10°-20°	292.3	10.6
20°-30°	437.9	15.8
30°-40°	519.0	18.8
40°-50°	519.9	18.8
50°-60°	441.3	16.0
60°-70°	297.6	10.8
70°-80°	130.7	4.7
80°-90°	21.3	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°	833.3	30.2
0°-40°	1352.2	48.9
0°-60°	2313.5	83.7
0°-90°	2763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2763.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1096	1096	1096	1096	1096	
5°	1088	1086	1089	1086	1112	103
15°	1042	1030	1037	1042	1042	290
25°	932	937	952	965	963	431
35°	811	814	832	852	851	504
45°	652	665	676	693	677	505
55°	488	484	497	494	494	434
65°	300	296	307	296	298	298
75°	125	122	124	116	120	134
85°	15	15	15	15	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1096.3	1096.3	1096.3	1096.3	1096.3
2.5°	1105.8	1097.4	1089.6	1098.7	1104.2
5°	1088.5	1086.0	1088.9	1085.7	1111.9
7.5°	1066.1	1075.9	1081.6	1078.0	1079.6
10°	1054.2	1050.9	1063.4	1072.2	1071.0
12.5°	1041.5	1046.6	1047.3	1056.8	1057.6
15°	1042.2	1030.2	1036.6	1041.9	1042.4
17.5°	1001.7	1014.8	1019.1	1031.5	1016.2
20°	996.8	987.3	996.8	1009.4	1007.4
22.5°	966.3	955.7	976.1	987.3	986.6
25°	931.8	936.9	952.2	964.6	962.7
27.5°	901.5	907.5	929.3	946.4	935.3
30°	878.2	875.2	893.6	908.9	917.4
32.5°	836.4	847.2	868.7	883.8	875.8
35°	811.1	813.5	832.3	851.6	851.0
37.5°	766.8	777.9	804.4	809.8	804.8
40°	729.0	740.2	764.1	769.9	767.5
42.5°	701.1	703.1	723.6	730.2	719.6
45°	652.5	664.7	675.7	693.2	676.7
47.5°	611.2	616.9	640.6	645.3	636.7
50°	573.7	575.7	599.6	593.8	588.1
52.5°	526.6	534.9	548.4	547.2	540.6
55°	487.8	484.5	497.3	493.9	493.7
57.5°	441.2	446.9	457.3	452.0	443.3
60°	397.6	397.7	401.6	395.5	394.4
62.5°	349.1	350.8	351.6	344.1	356.3
65°	299.7	295.7	307.3	295.6	297.5
67.5°	254.2	256.2	255.1	247.7	250.5
70°	208.1	210.6	208.8	200.4	203.0
72.5°	165.9	162.8	164.8	154.3	159.1
75°	124.7	122.2	124.4	115.6	119.6
77.5°	84.9	86.9	85.5	80.8	83.5
80°	56.1	54.5	54.5	51.8	52.4
82.5°	32.7	31.1	30.7	29.9	31.1
85°	15.3	14.9	15.1	14.7	14.2
87.5°	5.5	5.7	5.7	5.4	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)