

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: P589247

Luminaire Tested: **FMR-24-2-LD4-2STD-50-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589247
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-LD4-2STD-50-UNV-81-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

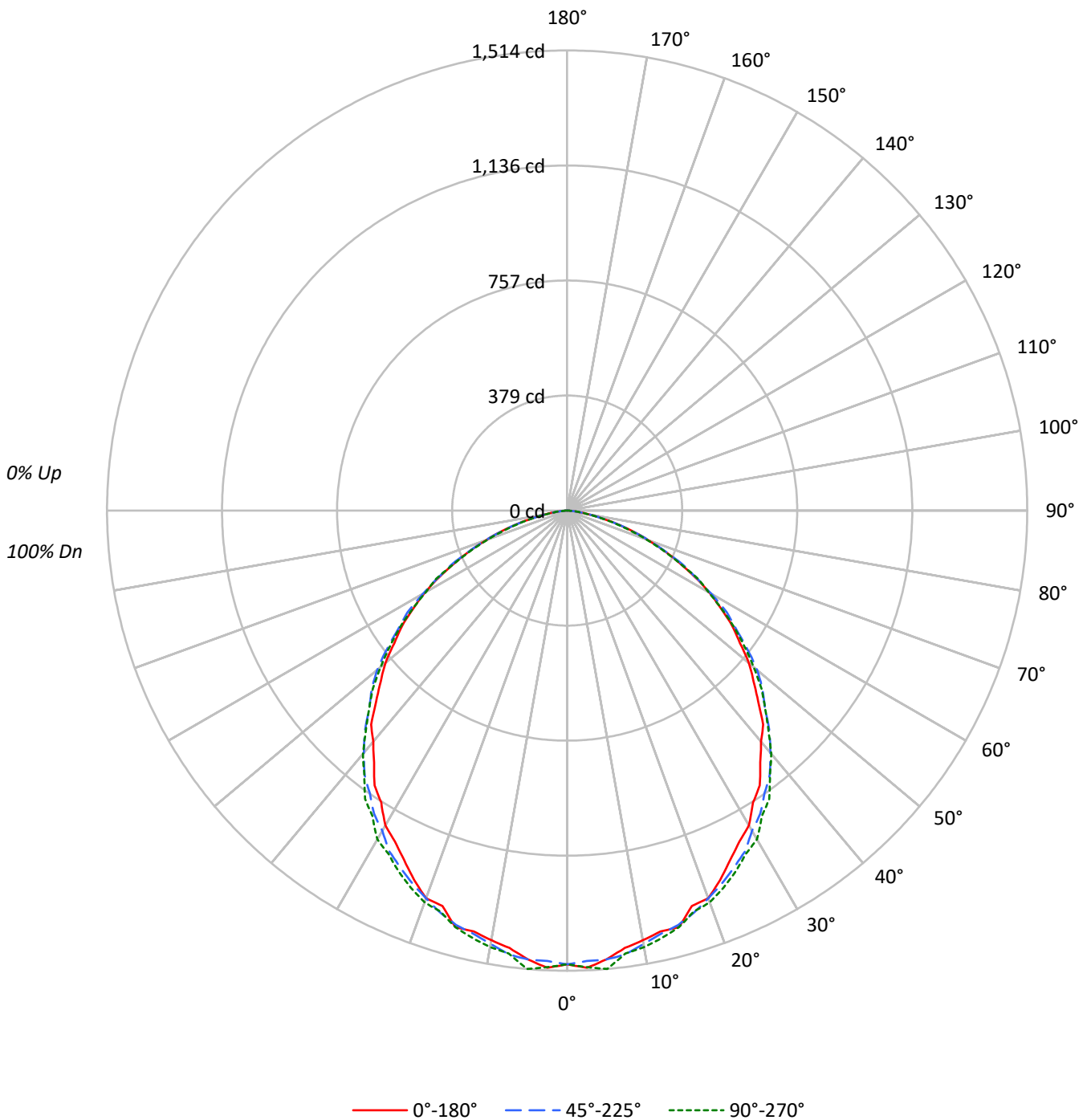
Lumens per Lamp: N/A
Luminaire Lumens: 3762.0 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	4017	4017	4017
5°	4004	4005	4089
10°	3922	3957	3985
15°	3953	3932	3954
20°	3887	3887	3928
25°	3767	3850	3892
30°	3715	3781	3881
35°	3628	3723	3806
40°	3486	3654	3671
45°	3381	3502	3506
50°	3270	3418	3352
55°	3116	3176	3154
60°	2914	2943	2890
65°	2598	2664	2579
70°	2229	2237	2175
75°	1765	1761	1694
80°	1182	1150	1105
85°	642	636	596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.4	3.7
10°-20°	397.9	10.6
20°-30°	596.2	15.8
30°-40°	706.6	18.8
40°-50°	707.9	18.8
50°-60°	600.9	16.0
60°-70°	405.1	10.8
70°-80°	178.0	4.7
80°-90°	28.9	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°	1134.5	30.2
0°-40°	1841.1	48.9
0°-60°	3149.9	83.7
0°-90°	3762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1493	1493	1493	1493	1493	
5°	1482	1479	1483	1478	1514	140
15°	1419	1403	1411	1419	1419	395
25°	1269	1276	1296	1313	1311	587
35°	1104	1108	1133	1159	1159	686
45°	888	905	920	944	921	687
55°	664	660	677	672	672	591
65°	408	403	418	402	405	406
75°	170	166	169	158	163	182
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1492.7	1492.7	1492.7	1492.7	1492.7
2.5°	1505.6	1494.2	1483.6	1495.9	1503.5
5°	1482.1	1478.6	1482.6	1478.2	1513.9
7.5°	1451.6	1464.9	1472.6	1467.8	1469.9
10°	1435.4	1430.8	1448.0	1459.9	1458.2
12.5°	1418.1	1425.0	1426.0	1438.9	1440.1
15°	1419.0	1402.7	1411.3	1418.7	1419.2
17.5°	1363.9	1381.7	1387.6	1404.4	1383.6
20°	1357.2	1344.3	1357.2	1374.3	1371.6
22.5°	1315.7	1301.3	1329.0	1344.3	1343.3
25°	1268.7	1275.7	1296.5	1313.4	1310.7
27.5°	1227.5	1235.6	1265.2	1288.6	1273.5
30°	1195.7	1191.6	1216.7	1237.5	1249.1
32.5°	1138.8	1153.5	1182.8	1203.4	1192.4
35°	1104.3	1107.6	1133.2	1159.4	1158.7
37.5°	1044.0	1059.2	1095.3	1102.6	1095.8
40°	992.5	1007.8	1040.3	1048.2	1045.0
42.5°	954.6	957.3	985.2	994.3	979.8
45°	888.5	905.0	920.1	943.8	921.4
47.5°	832.2	839.9	872.3	878.6	866.9
50°	781.1	783.8	816.4	808.5	800.8
52.5°	716.9	728.3	746.6	745.1	736.0
55°	664.1	659.7	677.0	672.4	672.2
57.5°	600.7	608.4	622.7	615.4	603.6
60°	541.4	541.6	546.8	538.5	536.9
62.5°	475.3	477.6	478.7	468.5	485.1
65°	408.0	402.6	418.4	402.4	405.1
67.5°	346.1	348.8	347.3	337.3	341.1
70°	283.3	286.8	284.3	272.9	276.4
72.5°	225.9	221.6	224.3	210.1	216.6
75°	169.8	166.3	169.4	157.5	162.9
77.5°	115.6	118.3	116.4	110.0	113.7
80°	76.3	74.2	74.2	70.5	71.3
82.5°	44.5	42.4	41.8	40.7	42.4
85°	20.8	20.2	20.6	20.0	19.3
87.5°	7.5	7.7	7.7	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)