

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: P589119

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-81-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589119
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

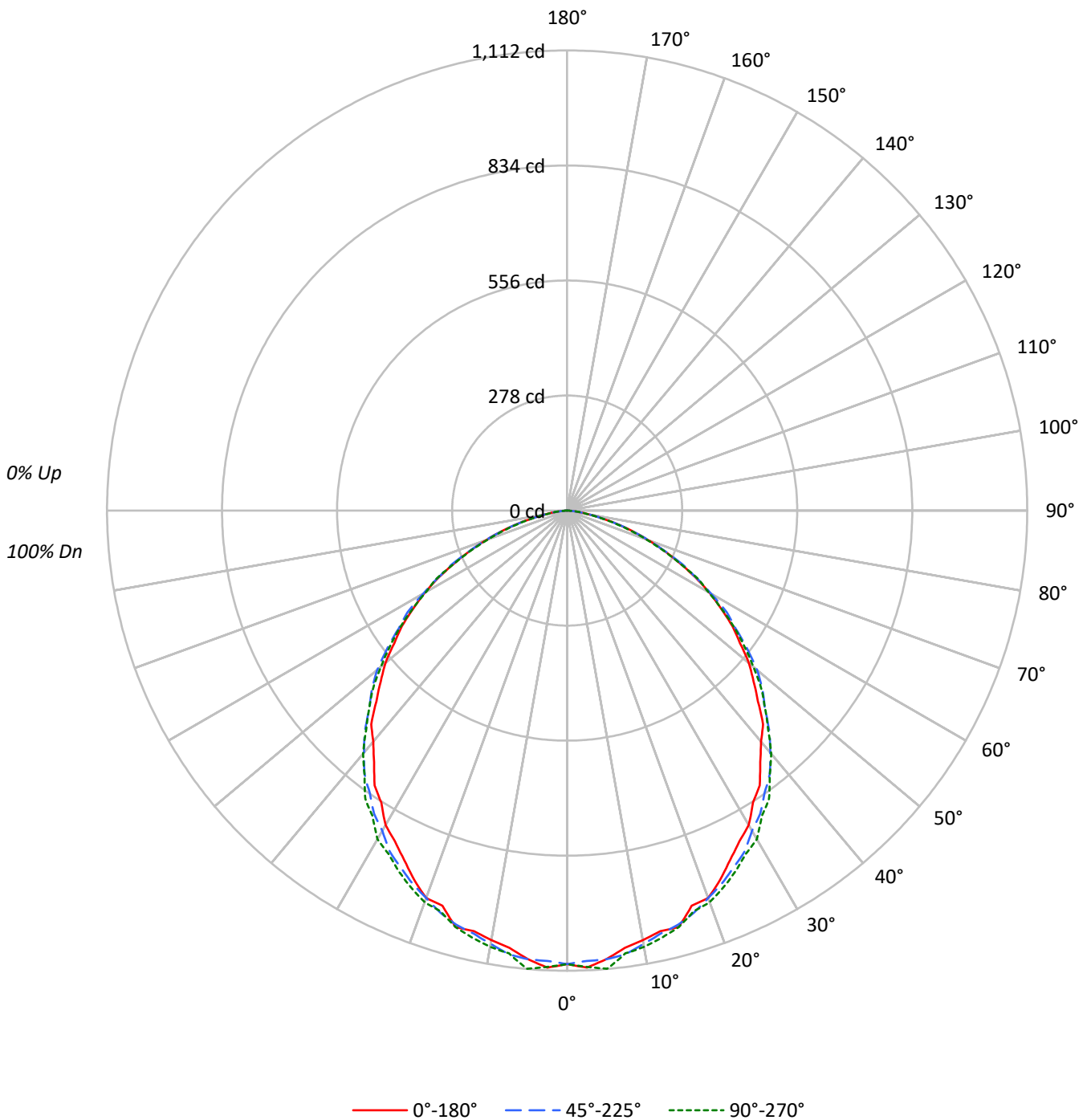
Lumens per Lamp: N/A
Luminaire Lumens: 2762.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P589119

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-86-EDD

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°	2949	2949	2949
5°	2939	2940	3002
10°	2880	2905	2925
15°	2902	2887	2903
20°	2853	2853	2884
25°	2766	2826	2857
30°	2728	2776	2849
35°	2664	2733	2795
40°	2560	2683	2695
45°	2482	2571	2575
50°	2401	2509	2461
55°	2288	2332	2315
60°	2139	2160	2122
65°	1907	1956	1894
70°	1637	1642	1596
75°	1297	1293	1243
80°	868	845	812
85°	472	466	435



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.1	3.7
10°-20°	292.2	10.6
20°-30°	437.7	15.8
30°-40°	518.8	18.8
40°-50°	519.7	18.8
50°-60°	441.2	16.0
60°-70°	297.4	10.8
70°-80°	130.7	4.7
80°-90°	21.2	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°	832.9	30.2
0°-40°	1351.7	48.9
0°-60°	2312.6	83.7
0°-90°	2762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1096	1096	1096	1096	1096	
5°	1088	1086	1088	1085	1112	103
15°	1042	1030	1036	1042	1042	290
25°	932	937	952	964	962	431
35°	811	813	832	851	851	503
45°	652	664	676	693	676	505
55°	488	484	497	494	494	434
65°	300	296	307	295	297	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°	1095.9	1095.9	1095.9	1095.9	1095.9
2.5°	1105.4	1097.0	1089.2	1098.3	1103.8
5°	1088.1	1085.6	1088.5	1085.3	1111.5
7.5°	1065.8	1075.5	1081.2	1077.6	1079.2
10°	1053.9	1050.5	1063.1	1071.8	1070.6
12.5°	1041.1	1046.2	1046.9	1056.4	1057.3
15°	1041.8	1029.8	1036.2	1041.6	1042.0
17.5°	1001.4	1014.4	1018.8	1031.1	1015.8
20°	996.4	986.9	996.4	1009.0	1007.0
22.5°	966.0	955.4	975.8	986.9	986.2
25°	931.5	936.6	951.8	964.3	962.3
27.5°	901.2	907.1	928.9	946.0	935.0
30°	877.8	874.9	893.3	908.6	917.0
32.5°	836.1	846.9	868.4	883.5	875.4
35°	810.8	813.2	832.0	851.2	850.7
37.5°	766.5	777.7	804.1	809.5	804.6
40°	728.7	739.9	763.8	769.6	767.2
42.5°	700.8	702.8	723.3	730.0	719.4
45°	652.3	664.5	675.5	692.9	676.5
47.5°	611.0	616.6	640.4	645.1	636.5
50°	573.5	575.5	599.4	593.6	587.9
52.5°	526.4	534.7	548.2	547.0	540.4
55°	487.6	484.3	497.1	493.7	493.5
57.5°	441.0	446.7	457.2	451.8	443.2
60°	397.5	397.6	401.4	395.3	394.2
62.5°	348.9	350.6	351.5	344.0	356.1
65°	299.5	295.6	307.2	295.4	297.4
67.5°	254.1	256.1	255.0	247.6	250.4
70°	208.0	210.5	208.7	200.4	202.9
72.5°	165.8	162.7	164.7	154.2	159.0
75°	124.7	122.1	124.4	115.6	119.6
77.5°	84.9	86.9	85.5	80.8	83.5
80°	56.0	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	14.1
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)