

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: P589249

Luminaire Tested: **FMR-24-2-LD4-2STD-50-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589249
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-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

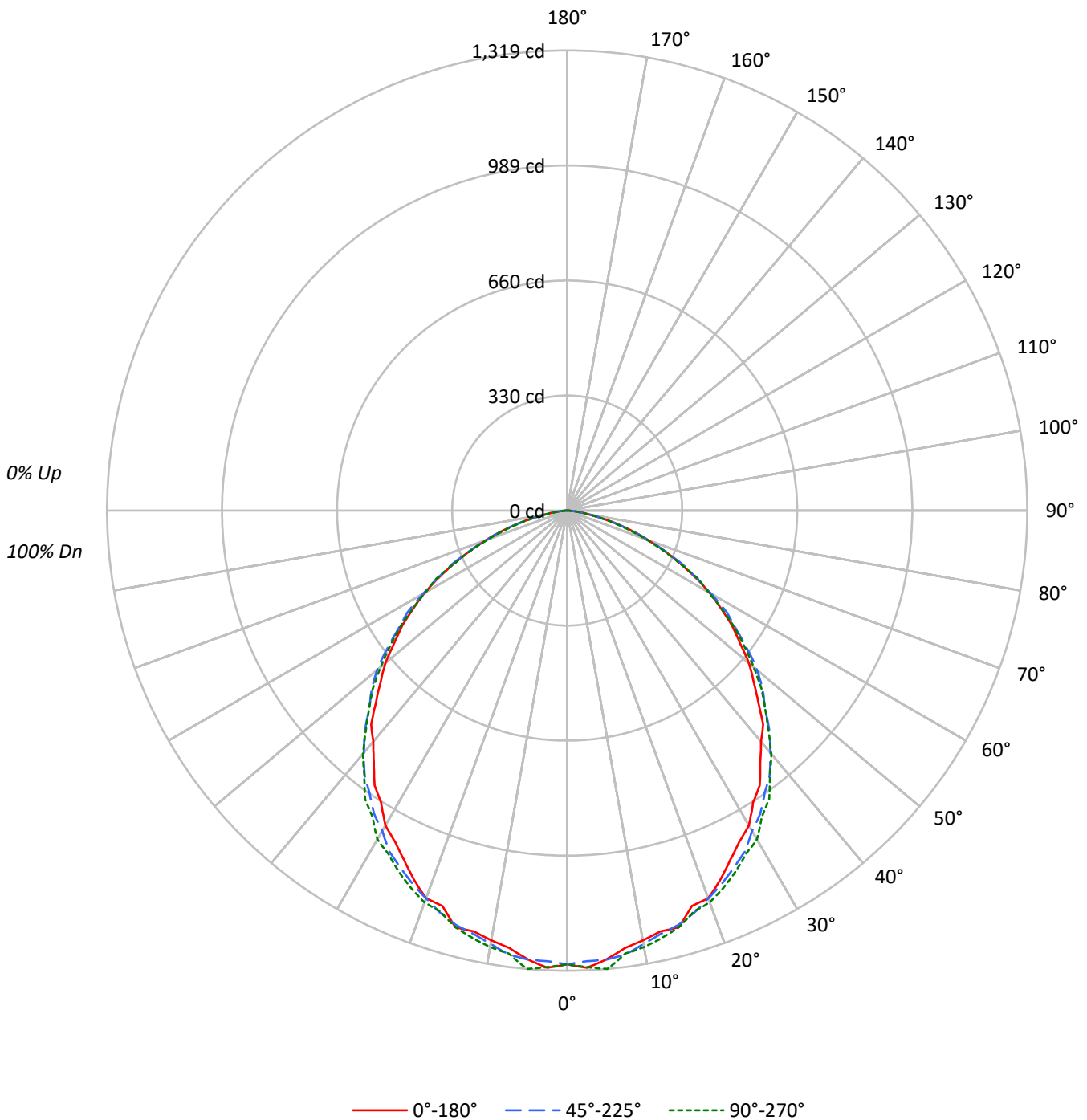
Lumens per Lamp: N/A
Luminaire Lumens: 3278.0 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3500	3500	3500
5°	3488	3490	3563
10°	3418	3448	3472
15°	3445	3426	3445
20°	3387	3387	3423
25°	3282	3354	3391
30°	3237	3294	3382
35°	3161	3244	3317
40°	3038	3184	3198
45°	2946	3051	3056
50°	2849	2978	2921
55°	2715	2768	2748
60°	2539	2564	2518
65°	2264	2322	2248
70°	1943	1949	1895
75°	1538	1535	1475
80°	1031	1003	962
85°	559	556	519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.3	3.7
10°-20°	346.7	10.6
20°-30°	519.5	15.8
30°-40°	615.7	18.8
40°-50°	616.8	18.8
50°-60°	523.6	16.0
60°-70°	353.0	10.8
70°-80°	155.1	4.7
80°-90°	25.2	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°	988.6	30.2
0°-40°	1604.3	48.9
0°-60°	2744.7	83.7
0°-90°	3278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3278.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1291	1288	1292	1288	1319	122
15°	1236	1222	1230	1236	1237	344
25°	1106	1112	1130	1144	1142	511
35°	962	965	987	1010	1010	597
45°	774	789	802	822	803	599
55°	579	575	590	586	586	515
65°	356	351	365	351	353	354
75°	148	145	148	137	142	159
85°	18	18	18	18	17	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1300.6	1300.6	1300.6	1300.6	1300.6
2.5°	1311.9	1302.0	1292.7	1303.5	1310.0
5°	1291.4	1288.4	1291.9	1288.0	1319.1
7.5°	1264.9	1276.4	1283.2	1279.0	1280.8
10°	1250.8	1246.7	1261.7	1272.1	1270.6
12.5°	1235.6	1241.7	1242.5	1253.8	1254.8
15°	1236.5	1222.2	1229.8	1236.1	1236.6
17.5°	1188.4	1203.9	1209.1	1223.7	1205.6
20°	1182.6	1171.3	1182.6	1197.5	1195.2
22.5°	1146.5	1133.9	1158.1	1171.3	1170.5
25°	1105.5	1111.5	1129.7	1144.5	1142.1
27.5°	1069.6	1076.6	1102.5	1122.8	1109.7
30°	1041.8	1038.3	1060.2	1078.3	1088.4
32.5°	992.3	1005.1	1030.6	1048.6	1039.0
35°	962.2	965.1	987.4	1010.3	1009.6
37.5°	909.7	923.0	954.4	960.7	954.9
40°	864.8	878.1	906.5	913.4	910.5
42.5°	831.8	834.1	858.5	866.4	853.8
45°	774.2	788.6	801.7	822.4	802.9
47.5°	725.1	731.8	760.1	765.6	755.4
50°	680.6	683.0	711.4	704.5	697.8
52.5°	624.7	634.6	650.6	649.2	641.3
55°	578.7	574.8	589.9	585.9	585.7
57.5°	523.4	530.2	542.6	536.2	526.0
60°	471.7	471.9	476.4	469.2	467.9
62.5°	414.1	416.1	417.1	408.2	422.7
65°	355.5	350.8	364.6	350.6	353.0
67.5°	301.6	304.0	302.6	293.9	297.2
70°	246.9	249.9	247.7	237.8	240.8
72.5°	196.8	193.1	195.5	183.0	188.8
75°	147.9	144.9	147.6	137.2	141.9
77.5°	100.8	103.1	101.4	95.9	99.1
80°	66.5	64.7	64.7	61.5	62.1
82.5°	38.8	36.9	36.4	35.4	36.9
85°	18.1	17.6	18.0	17.5	16.8
87.5°	6.5	6.7	6.7	6.4	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)