

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: P589191

Luminaire Tested: **FMR-24-2-LD4-2STD-35-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589191
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-35-UNV-82-86-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

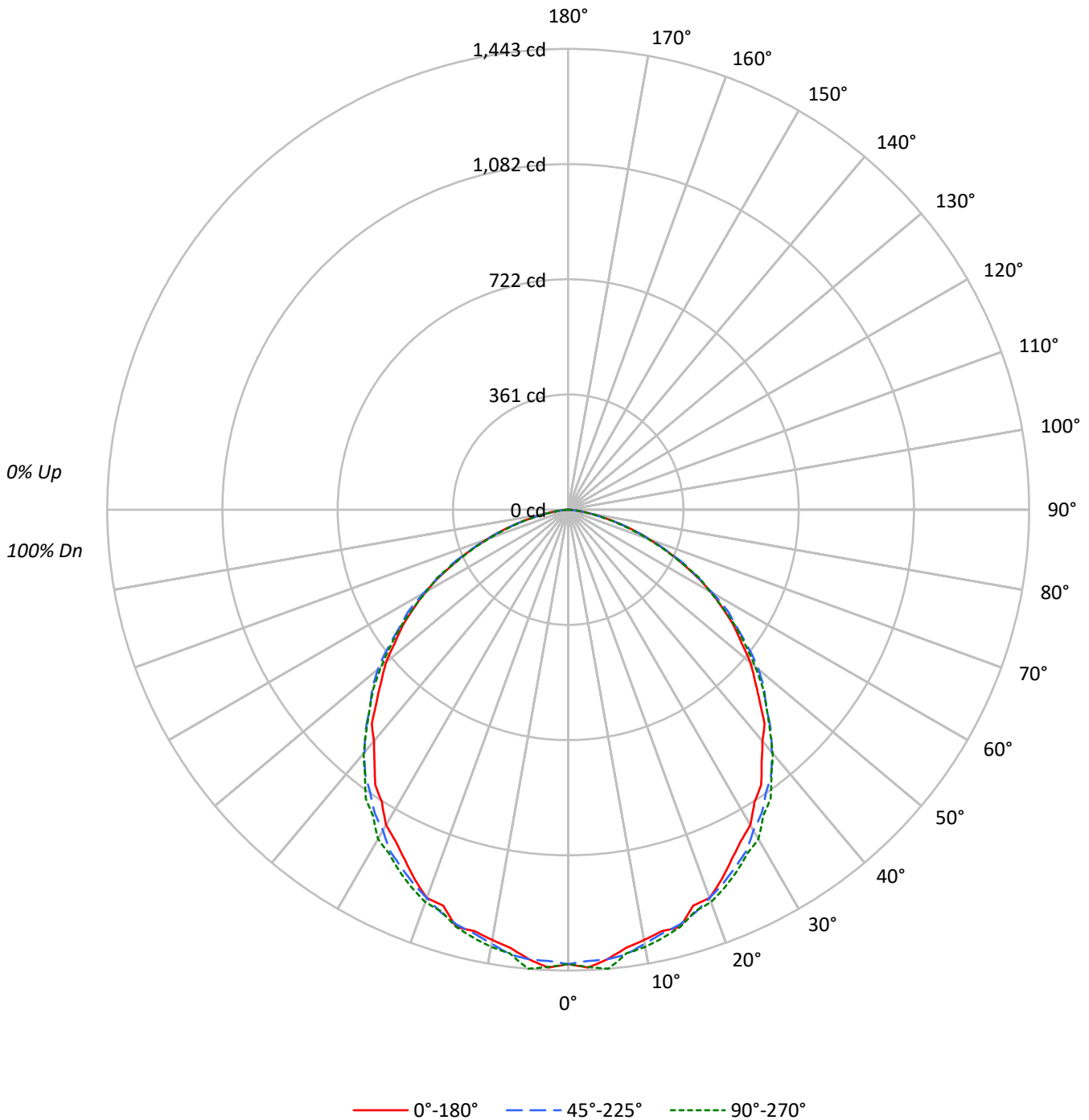
Lumens per Lamp: N/A
Luminaire Lumens: 3586.0 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3829	3829	3829
5°	3816	3818	3898
10°	3739	3771	3798
15°	3768	3748	3769
20°	3705	3705	3744
25°	3591	3669	3710
30°	3541	3604	3700
35°	3458	3549	3628
40°	3323	3484	3499
45°	3223	3338	3342
50°	3117	3258	3195
55°	2970	3028	3006
60°	2777	2805	2754
65°	2476	2539	2459
70°	2125	2132	2072
75°	1682	1679	1614
80°	1127	1096	1054
85°	611	608	568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.8	3.7
10°-20°	379.3	10.6
20°-30°	568.3	15.8
30°-40°	673.5	18.8
40°-50°	674.8	18.8
50°-60°	572.8	16.0
60°-70°	386.2	10.8
70°-80°	169.7	4.7
80°-90°	27.6	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°	1081.5	30.2
0°-40°	1755.0	48.9
0°-60°	3002.6	83.7
0°-90°	3586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3586.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1423	1423	1423	1423	1423	
5°	1413	1409	1413	1409	1443	133
15°	1353	1337	1345	1352	1353	377
25°	1209	1216	1236	1252	1249	559
35°	1053	1056	1080	1105	1104	654
45°	847	863	877	900	878	655
55°	633	629	645	641	641	563
65°	389	384	399	384	386	387
75°	162	158	162	150	155	173
85°	20	19	20	19	18	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1422.8	1422.8	1422.8	1422.8	1422.8
2.5°	1435.1	1424.3	1414.2	1426.0	1433.1
5°	1412.7	1409.4	1413.3	1409.1	1443.0
7.5°	1383.7	1396.4	1403.7	1399.1	1401.2
10°	1368.3	1363.9	1380.2	1391.6	1390.0
12.5°	1351.7	1358.4	1359.3	1371.6	1372.7
15°	1352.7	1337.0	1345.3	1352.3	1352.8
17.5°	1300.1	1317.0	1322.7	1338.7	1318.9
20°	1293.7	1281.4	1293.7	1310.0	1307.5
22.5°	1254.2	1240.4	1266.9	1281.4	1280.5
25°	1209.4	1216.0	1235.8	1252.0	1249.4
27.5°	1170.0	1177.8	1206.1	1228.3	1214.0
30°	1139.7	1135.9	1159.8	1179.6	1190.6
32.5°	1085.5	1099.5	1127.4	1147.1	1136.6
35°	1052.7	1055.8	1080.2	1105.2	1104.5
37.5°	995.2	1009.7	1044.0	1051.0	1044.6
40°	946.1	960.6	991.7	999.2	996.1
42.5°	909.9	912.5	939.1	947.8	934.0
45°	846.9	862.7	877.0	899.6	878.3
47.5°	793.3	800.6	831.5	837.5	826.3
50°	744.6	747.1	778.2	770.7	763.3
52.5°	683.4	694.2	711.7	710.2	701.6
55°	633.1	628.8	645.4	641.0	640.8
57.5°	572.6	580.0	593.6	586.6	575.4
60°	516.0	516.2	521.2	513.3	511.8
62.5°	453.0	455.2	456.3	446.6	462.4
65°	388.9	383.8	398.8	383.6	386.2
67.5°	329.9	332.5	331.0	321.5	325.2
70°	270.1	273.4	271.0	260.1	263.4
72.5°	215.3	211.3	213.8	200.2	206.5
75°	161.8	158.5	161.5	150.1	155.2
77.5°	110.2	112.8	111.0	104.9	108.4
80°	72.7	70.7	70.7	67.2	68.0
82.5°	42.4	40.4	39.9	38.8	40.4
85°	19.8	19.3	19.7	19.1	18.4
87.5°	7.2	7.3	7.3	7.0	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)