

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: P589182

Luminaire Tested: **FMR-24-2-LD4-2STD-35-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589182
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-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

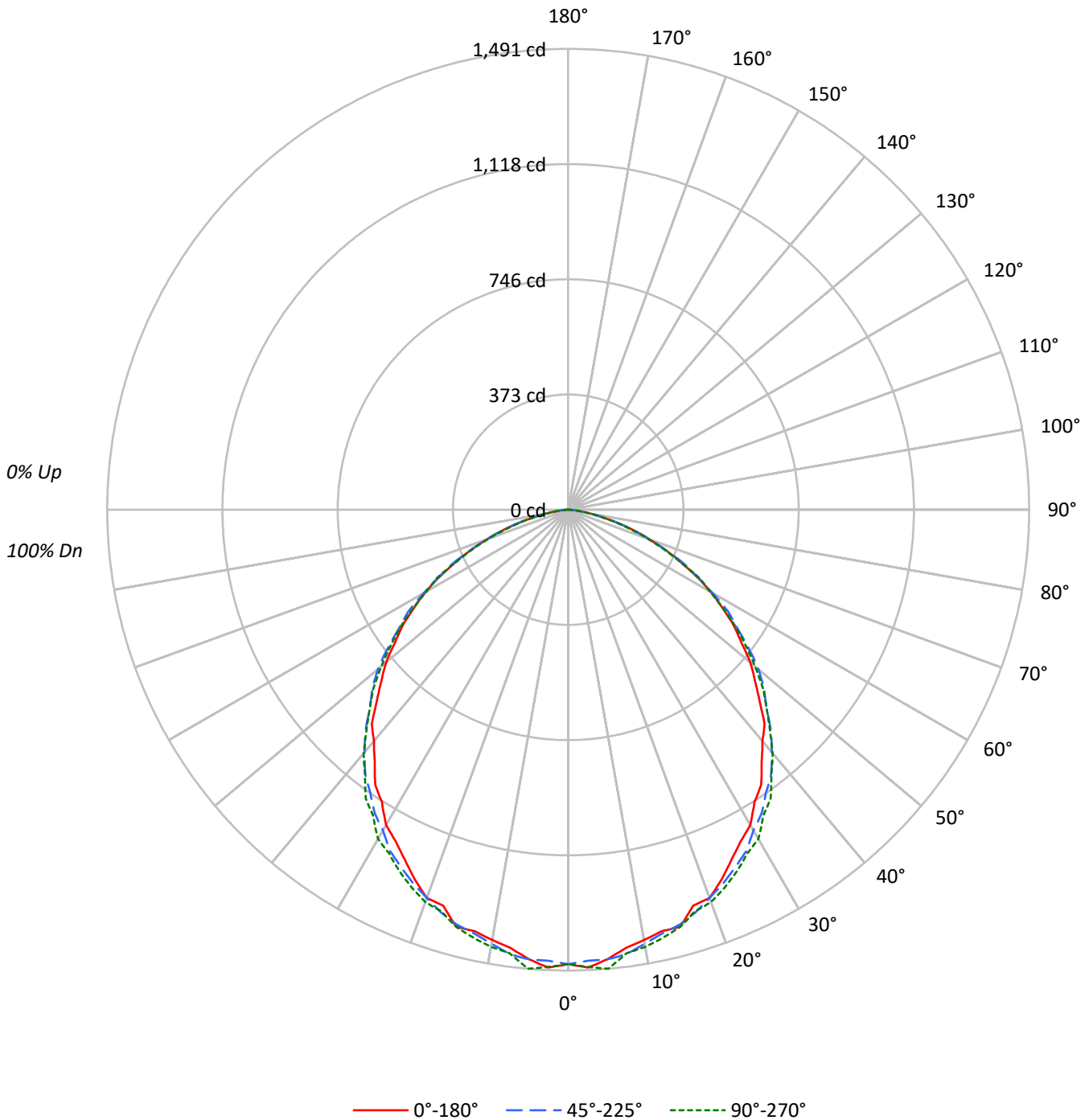
Lumens per Lamp: N/A
Luminaire Lumens: 3705.0 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3956	3956	3956
5°	3943	3944	4027
10°	3863	3897	3924
15°	3893	3872	3894
20°	3828	3828	3869
25°	3710	3791	3833
30°	3659	3723	3822
35°	3573	3666	3749
40°	3434	3599	3615
45°	3330	3448	3454
50°	3221	3366	3301
55°	3069	3128	3106
60°	2870	2898	2846
65°	2558	2624	2541
70°	2195	2203	2142
75°	1738	1734	1668
80°	1165	1133	1088
85°	633	627	587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	3.7
10°-20°	391.9	10.6
20°-30°	587.1	15.8
30°-40°	695.9	18.8
40°-50°	697.2	18.8
50°-60°	591.8	16.0
60°-70°	399.0	10.8
70°-80°	175.3	4.7
80°-90°	28.5	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°	1117.3	30.2
0°-40°	1813.2	48.9
0°-60°	3102.2	83.7
0°-90°	3705.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3705.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1470	1470	1470	1470	1470	
5°	1460	1456	1460	1456	1491	138
15°	1398	1381	1390	1397	1398	389
25°	1250	1256	1277	1294	1291	578
35°	1088	1091	1116	1142	1141	675
45°	875	891	906	930	908	677
55°	654	650	667	662	662	582
65°	402	396	412	396	399	400
75°	167	164	167	155	160	179
85°	20	20	20	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1470.1	1470.1	1470.1	1470.1	1470.1
2.5°	1482.8	1471.6	1461.1	1473.3	1480.7
5°	1459.6	1456.2	1460.2	1455.8	1490.9
7.5°	1429.6	1442.7	1450.3	1445.6	1447.7
10°	1413.7	1409.1	1426.0	1437.8	1436.1
12.5°	1396.6	1403.4	1404.4	1417.1	1418.2
15°	1397.5	1381.4	1390.0	1397.2	1397.7
17.5°	1343.3	1360.7	1366.6	1383.1	1362.6
20°	1336.6	1323.9	1336.6	1353.5	1350.9
22.5°	1295.8	1281.6	1308.9	1323.9	1323.0
25°	1249.5	1256.3	1276.8	1293.5	1290.9
27.5°	1208.9	1216.8	1246.1	1269.0	1254.2
30°	1177.6	1173.6	1198.2	1218.7	1230.1
32.5°	1121.6	1136.0	1164.8	1185.2	1174.3
35°	1087.6	1090.8	1116.1	1141.9	1141.1
37.5°	1028.2	1043.2	1078.7	1085.9	1079.2
40°	977.5	992.5	1024.6	1032.4	1029.1
42.5°	940.1	942.8	970.3	979.2	965.0
45°	875.0	891.3	906.1	929.5	907.5
47.5°	819.6	827.2	859.1	865.3	853.7
50°	769.3	771.9	804.0	796.2	788.6
52.5°	706.1	717.3	735.3	733.8	724.9
55°	654.1	649.7	666.8	662.2	662.0
57.5°	591.6	599.2	613.3	606.1	594.5
60°	533.2	533.4	538.5	530.3	528.8
62.5°	468.1	470.3	471.5	461.4	477.7
65°	401.8	396.5	412.1	396.3	399.0
67.5°	340.9	343.5	342.0	332.2	336.0
70°	279.0	282.4	280.0	268.8	272.2
72.5°	222.5	218.3	220.9	206.9	213.3
75°	167.2	163.8	166.8	155.1	160.4
77.5°	113.9	116.5	114.6	108.4	112.0
80°	75.2	73.1	73.1	69.5	70.2
82.5°	43.8	41.8	41.2	40.0	41.8
85°	20.5	19.9	20.3	19.7	19.0
87.5°	7.4	7.6	7.6	7.2	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)