

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: P589218

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-81-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589218
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-40-UNV-81-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

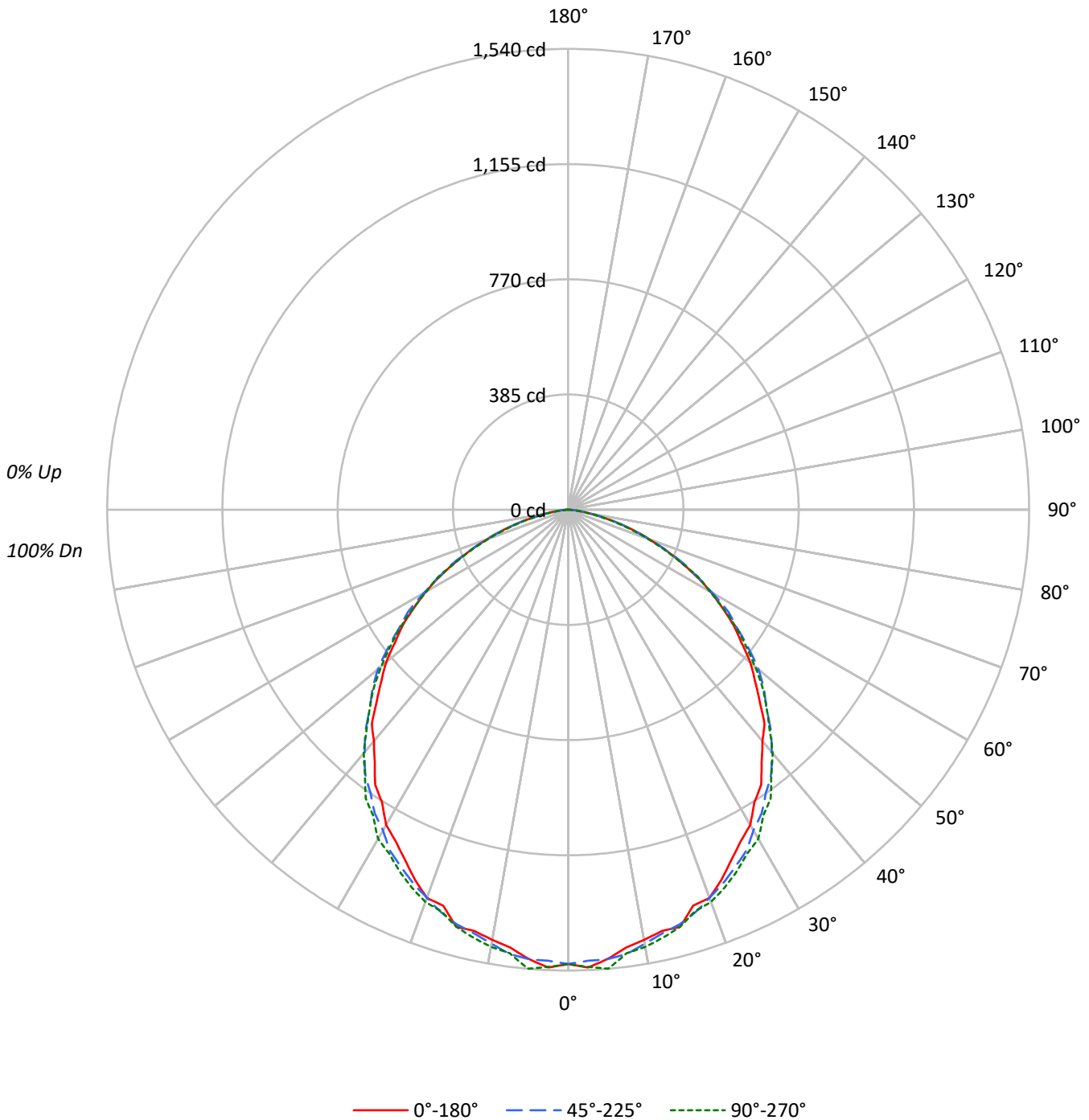
Lumens per Lamp: N/A
Luminaire Lumens: 3826.0 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589218

CATALOG NUMBER: FMR-24-2-LD4-2STD-40-UNV-81-94-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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°	4085	4085	4085
5°	4072	4073	4159
10°	3989	4024	4052
15°	4021	3999	4021
20°	3953	3953	3995
25°	3831	3915	3958
30°	3778	3845	3947
35°	3689	3786	3871
40°	3546	3717	3733
45°	3439	3561	3566
50°	3326	3476	3409
55°	3169	3231	3208
60°	2963	2993	2939
65°	2642	2709	2623
70°	2267	2275	2212
75°	1796	1791	1722
80°	1203	1170	1124
85°	655	648	605



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.8	3.7
10°-20°	404.7	10.6
20°-30°	606.3	15.8
30°-40°	718.6	18.8
40°-50°	719.9	18.8
50°-60°	611.1	16.0
60°-70°	412.0	10.8
70°-80°	181.0	4.7
80°-90°	29.4	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°	1153.8	30.2
0°-40°	1872.4	48.9
0°-60°	3203.5	83.7
0°-90°	3826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1518	1518	1518	1518	1518	
5°	1507	1504	1508	1503	1540	142
15°	1443	1426	1435	1443	1443	402
25°	1290	1297	1318	1336	1333	597
35°	1123	1126	1152	1179	1178	697
45°	904	920	936	960	937	699
55°	675	671	689	684	684	601
65°	415	410	426	409	412	413
75°	173	169	172	160	166	185
85°	21	21	21	20	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1518.1	1518.1	1518.1	1518.1	1518.1
2.5°	1531.2	1519.6	1508.8	1521.4	1529.0
5°	1507.3	1503.8	1507.9	1503.4	1539.6
7.5°	1476.3	1489.8	1497.7	1492.8	1494.9
10°	1459.8	1455.1	1472.6	1484.7	1483.0
12.5°	1442.2	1449.3	1450.2	1463.4	1464.6
15°	1443.2	1426.5	1435.3	1442.8	1443.4
17.5°	1387.1	1405.2	1411.2	1428.3	1407.1
20°	1380.3	1367.1	1380.3	1397.7	1395.0
22.5°	1338.1	1323.4	1351.7	1367.1	1366.2
25°	1290.3	1297.4	1318.5	1335.8	1333.0
27.5°	1248.4	1256.6	1286.8	1310.5	1295.2
30°	1216.0	1211.9	1237.4	1258.5	1270.3
32.5°	1158.2	1173.1	1202.9	1223.9	1212.7
35°	1123.1	1126.4	1152.5	1179.2	1178.4
37.5°	1061.8	1077.2	1113.9	1121.3	1114.5
40°	1009.4	1024.9	1058.0	1066.1	1062.7
42.5°	970.8	973.6	1002.0	1011.2	996.5
45°	903.6	920.4	935.7	959.8	937.1
47.5°	846.4	854.2	887.1	893.6	881.6
50°	794.4	797.2	830.3	822.2	814.4
52.5°	729.1	740.7	759.3	757.8	748.5
55°	675.4	670.9	688.6	683.9	683.7
57.5°	610.9	618.8	633.3	625.8	613.9
60°	550.6	550.8	556.1	547.6	546.1
62.5°	483.3	485.7	486.9	476.5	493.3
65°	414.9	409.5	425.5	409.3	412.0
67.5°	352.0	354.8	353.2	343.0	346.9
70°	288.1	291.7	289.1	277.5	281.1
72.5°	229.7	225.4	228.2	213.6	220.3
75°	172.7	169.2	172.3	160.1	165.6
77.5°	117.6	120.3	118.4	111.9	115.6
80°	77.6	75.5	75.5	71.7	72.5
82.5°	45.3	43.1	42.5	41.4	43.1
85°	21.2	20.6	21.0	20.4	19.6
87.5°	7.6	7.8	7.8	7.4	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)