

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: P589187

Luminaire Tested: **FMR-24-2-LD4-2STD-35-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589187
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-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

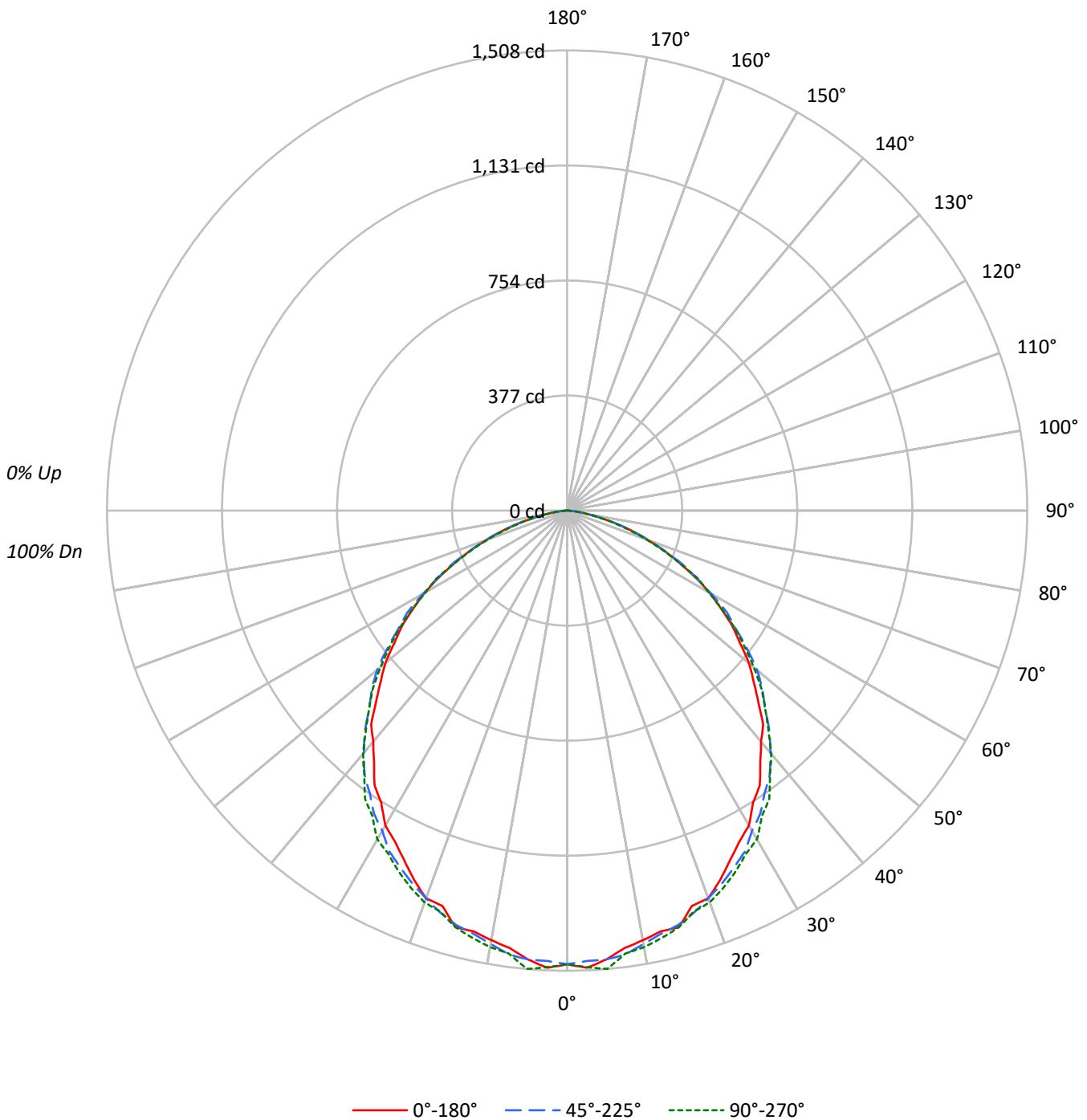
Lumens per Lamp: N/A
Luminaire Lumens: 3747.0 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4001	4001	4001
5°	3988	3989	4073
10°	3907	3941	3969
15°	3938	3916	3938
20°	3871	3871	3912
25°	3752	3834	3876
30°	3700	3765	3866
35°	3613	3708	3791
40°	3473	3640	3656
45°	3368	3487	3493
50°	3257	3404	3339
55°	3103	3164	3141
60°	2902	2931	2878
65°	2588	2653	2569
70°	2220	2227	2166
75°	1758	1754	1686
80°	1178	1145	1100
85°	639	633	593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	3.7
10°-20°	396.3	10.6
20°-30°	593.8	15.8
30°-40°	703.8	18.8
40°-50°	705.1	18.8
50°-60°	598.5	16.0
60°-70°	403.5	10.8
70°-80°	177.3	4.7
80°-90°	28.8	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°	1130.0	30.2
0°-40°	1833.8	48.9
0°-60°	3137.4	83.7
0°-90°	3747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1487	1487	1487	1487	1487	
5°	1476	1473	1477	1472	1508	139
15°	1413	1397	1406	1413	1414	394
25°	1264	1271	1291	1308	1306	584
35°	1100	1103	1129	1155	1154	683
45°	885	901	916	940	918	685
55°	662	657	674	670	670	588
65°	406	401	417	401	404	404
75°	169	166	169	157	162	181
85°	21	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°	1486.7	1486.7	1486.7	1486.7	1486.7
2.5°	1499.6	1488.3	1477.7	1490.0	1497.5
5°	1476.2	1472.7	1476.7	1472.3	1507.8
7.5°	1445.8	1459.1	1466.8	1462.0	1464.1
10°	1429.7	1425.1	1442.2	1454.1	1452.4
12.5°	1412.4	1419.3	1420.3	1433.2	1434.3
15°	1413.4	1397.1	1405.7	1413.0	1413.6
17.5°	1358.5	1376.1	1382.1	1398.8	1378.1
20°	1351.8	1338.9	1351.8	1368.9	1366.2
22.5°	1310.5	1296.1	1323.7	1338.9	1337.9
25°	1263.7	1270.6	1291.3	1308.2	1305.5
27.5°	1222.6	1230.6	1260.2	1283.4	1268.5
30°	1190.9	1186.9	1211.8	1232.6	1244.1
32.5°	1134.3	1148.9	1178.0	1198.6	1187.6
35°	1099.9	1103.2	1128.7	1154.8	1154.1
37.5°	1039.8	1055.0	1090.9	1098.2	1091.5
40°	988.6	1003.7	1036.2	1044.1	1040.8
42.5°	950.8	953.5	981.3	990.3	975.9
45°	884.9	901.4	916.4	940.0	917.8
47.5°	828.9	836.6	868.8	875.1	863.4
50°	778.0	780.7	813.1	805.3	797.6
52.5°	714.1	725.4	743.6	742.1	733.1
55°	661.5	657.1	674.3	669.7	669.5
57.5°	598.3	606.0	620.2	612.9	601.2
60°	539.2	539.4	544.6	536.3	534.8
62.5°	473.4	475.7	476.8	466.6	483.2
65°	406.4	401.0	416.7	400.8	403.5
67.5°	344.8	347.4	345.9	335.9	339.8
70°	282.2	285.6	283.1	271.8	275.3
72.5°	225.0	220.8	223.4	209.2	215.8
75°	169.1	165.7	168.7	156.8	162.2
77.5°	115.2	117.9	115.9	109.6	113.3
80°	76.0	73.9	73.9	70.3	71.0
82.5°	44.3	42.2	41.7	40.5	42.2
85°	20.7	20.2	20.5	20.0	19.2
87.5°	7.5	7.7	7.7	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)