

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: P589219

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589219
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-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

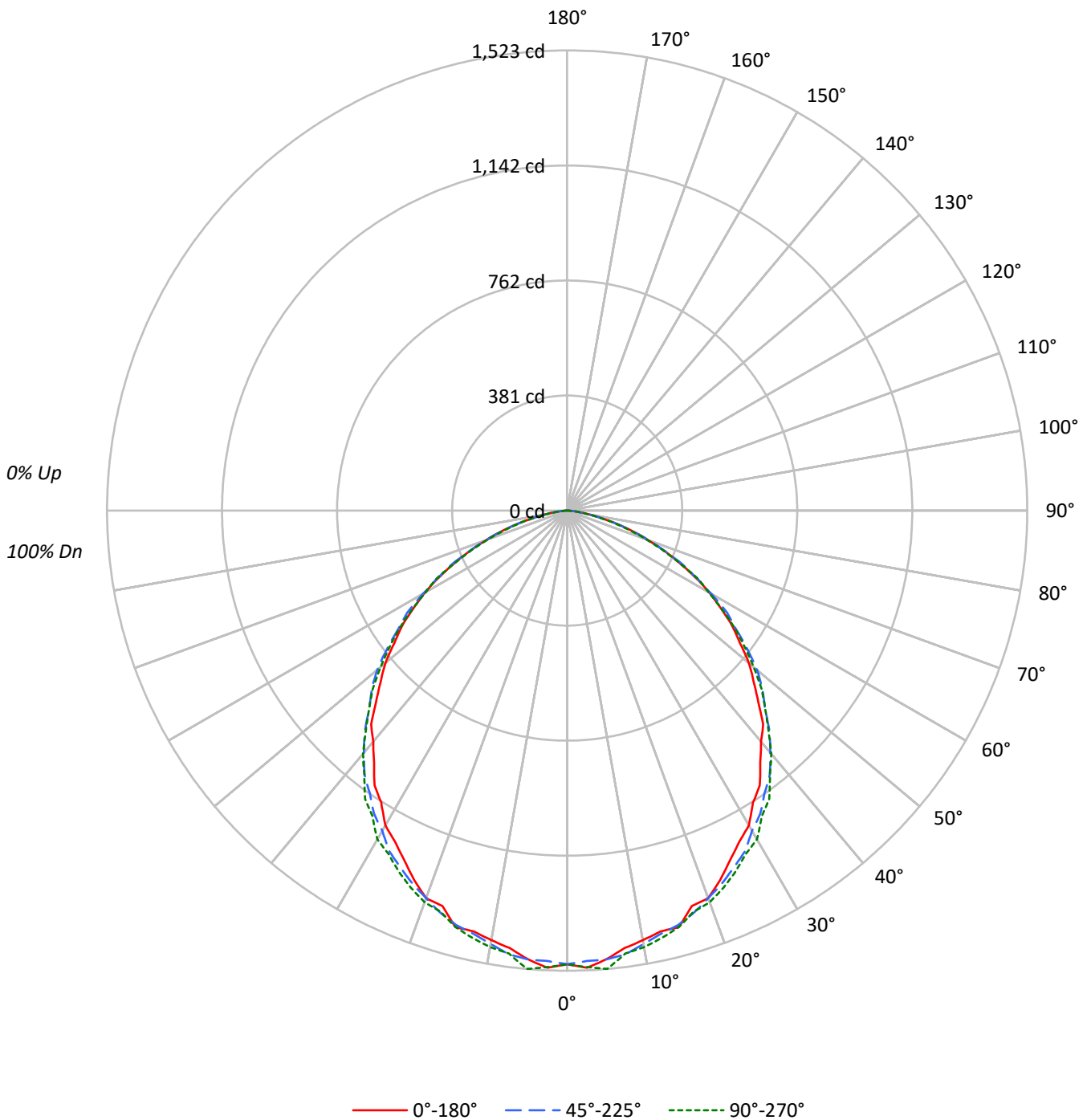
Lumens per Lamp: N/A
Luminaire Lumens: 3784.0 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	4040	4040	4040
5°	4027	4028	4113
10°	3945	3980	4008
15°	3976	3955	3977
20°	3909	3909	3951
25°	3789	3872	3915
30°	3737	3803	3904
35°	3649	3745	3828
40°	3507	3676	3692
45°	3401	3522	3527
50°	3289	3438	3372
55°	3134	3195	3172
60°	2930	2960	2907
65°	2613	2680	2595
70°	2242	2249	2187
75°	1776	1772	1703
80°	1190	1156	1111
85°	645	639	599



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.2	3.7
10°-20°	400.3	10.6
20°-30°	599.7	15.8
30°-40°	710.7	18.8
40°-50°	712.1	18.8
50°-60°	604.4	16.0
60°-70°	407.5	10.8
70°-80°	179.1	4.7
80°-90°	29.1	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°	1141.2	30.2
0°-40°	1851.9	48.9
0°-60°	3168.4	83.7
0°-90°	3784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3784.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1501	1501	1501	1501	1501	
5°	1491	1487	1491	1487	1523	141
15°	1427	1411	1420	1427	1428	398
25°	1276	1283	1304	1321	1318	590
35°	1111	1114	1140	1166	1165	690
45°	894	910	926	949	927	691
55°	668	664	681	676	676	594
65°	410	405	421	405	408	408
75°	171	167	170	158	164	183
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1501.4	1501.4	1501.4	1501.4	1501.4
2.5°	1514.4	1502.9	1492.3	1504.7	1512.3
5°	1490.7	1487.2	1491.3	1486.9	1522.7
7.5°	1460.1	1473.5	1481.2	1476.4	1478.5
10°	1443.8	1439.2	1456.4	1468.4	1466.7
12.5°	1426.4	1433.4	1434.3	1447.3	1448.5
15°	1427.3	1410.9	1419.6	1427.0	1427.5
17.5°	1371.9	1389.7	1395.7	1412.6	1391.7
20°	1365.1	1352.1	1365.1	1382.4	1379.7
22.5°	1323.4	1308.9	1336.8	1352.1	1351.2
25°	1276.1	1283.1	1304.1	1321.1	1318.4
27.5°	1234.7	1242.8	1272.6	1296.1	1281.0
30°	1202.7	1198.6	1223.8	1244.7	1256.4
32.5°	1145.5	1160.2	1189.7	1210.4	1199.4
35°	1110.8	1114.1	1139.9	1166.2	1165.4
37.5°	1050.1	1065.4	1101.7	1109.0	1102.3
40°	998.3	1013.7	1046.4	1054.4	1051.1
42.5°	960.2	962.9	991.0	1000.1	985.6
45°	893.7	910.3	925.5	949.3	926.8
47.5°	837.1	844.8	877.4	883.8	872.0
50°	785.7	788.4	821.2	813.2	805.5
52.5°	721.1	732.6	751.0	749.4	740.3
55°	668.0	663.6	681.0	676.4	676.2
57.5°	604.2	612.0	626.3	619.0	607.1
60°	544.5	544.7	550.0	541.6	540.1
62.5°	478.0	480.4	481.5	471.3	487.9
65°	410.4	405.0	420.9	404.8	407.5
67.5°	348.2	350.9	349.3	339.2	343.1
70°	285.0	288.5	285.9	274.5	278.0
72.5°	227.2	222.9	225.6	211.3	217.9
75°	170.8	167.3	170.4	158.4	163.8
77.5°	116.3	119.0	117.1	110.7	114.4
80°	76.8	74.6	74.6	71.0	71.7
82.5°	44.8	42.6	42.1	40.9	42.6
85°	20.9	20.4	20.7	20.2	19.4
87.5°	7.6	7.8	7.8	7.4	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)