

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: P589234

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-93-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589234
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-93-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

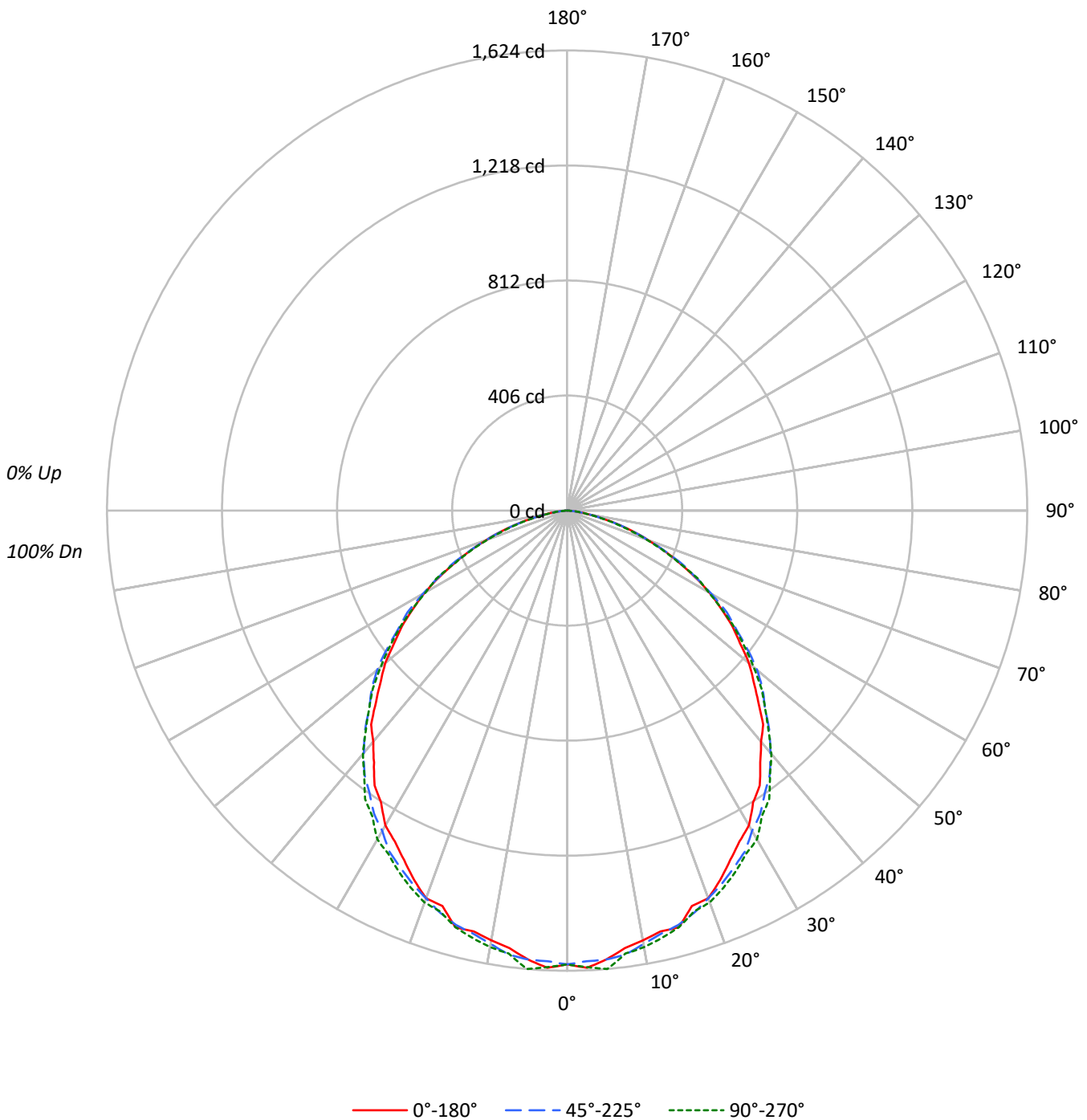
Lumens per Lamp: N/A
Luminaire Lumens: 4036.0 lumens
Efficiency: N/A
Efficacy: 121.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4309	4309	4309
5°	4295	4297	4387
10°	4208	4245	4275
15°	4241	4218	4242
20°	4170	4170	4214
25°	4041	4130	4175
30°	3986	4056	4164
35°	3892	3994	4084
40°	3740	3921	3938
45°	3628	3757	3762
50°	3508	3666	3597
55°	3343	3408	3384
60°	3126	3157	3100
65°	2787	2858	2767
70°	2391	2400	2333
75°	1894	1889	1816
80°	1269	1234	1185
85°	689	682	639



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.6	3.7
10°-20°	426.9	10.6
20°-30°	639.6	15.8
30°-40°	758.1	18.8
40°-50°	759.5	18.8
50°-60°	644.7	16.0
60°-70°	434.6	10.8
70°-80°	191.0	4.7
80°-90°	31.0	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°	1217.2	30.2
0°-40°	1975.2	48.9
0°-60°	3379.4	83.7
0°-90°	4036.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4036.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1601	1601	1601	1601	1601	
5°	1590	1586	1591	1586	1624	150
15°	1522	1505	1514	1522	1523	424
25°	1361	1369	1391	1409	1406	629
35°	1185	1188	1216	1244	1243	736
45°	953	971	987	1012	988	737
55°	712	708	726	721	721	634
65°	438	432	449	432	435	435
75°	182	178	182	169	175	195
85°	22	22	22	22	21	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1601.4	1601.4	1601.4	1601.4	1601.4
2.5°	1615.2	1603.0	1591.7	1604.9	1613.0
5°	1590.0	1586.3	1590.6	1585.9	1624.1
7.5°	1557.3	1571.6	1579.9	1574.7	1577.0
10°	1540.0	1535.0	1553.4	1566.2	1564.4
12.5°	1521.4	1528.8	1529.8	1543.7	1544.9
15°	1522.4	1504.8	1514.1	1522.0	1522.6
17.5°	1463.3	1482.3	1488.7	1506.7	1484.4
20°	1456.0	1442.2	1456.0	1474.4	1471.5
22.5°	1411.6	1396.1	1425.8	1442.2	1441.1
25°	1361.1	1368.6	1390.9	1409.1	1406.2
27.5°	1316.9	1325.6	1357.4	1382.4	1366.3
30°	1282.8	1278.4	1305.3	1327.6	1340.0
32.5°	1221.8	1237.5	1268.9	1291.0	1279.2
35°	1184.8	1188.3	1215.8	1243.9	1243.1
37.5°	1120.0	1136.4	1175.0	1182.9	1175.7
40°	1064.8	1081.2	1116.1	1124.6	1121.1
42.5°	1024.1	1027.0	1057.0	1066.7	1051.2
45°	953.2	971.0	987.1	1012.5	988.5
47.5°	892.8	901.1	935.8	942.6	930.0
50°	838.0	840.9	875.8	867.4	859.1
52.5°	769.2	781.4	801.0	799.3	789.6
55°	712.5	707.8	726.4	721.4	721.2
57.5°	644.5	652.8	668.1	660.2	647.6
60°	580.8	581.0	586.6	577.7	576.0
62.5°	509.9	512.4	513.6	502.6	520.4
65°	437.7	431.9	448.9	431.7	434.6
67.5°	371.3	374.2	372.6	361.8	366.0
70°	303.9	307.7	305.0	292.8	296.5
72.5°	242.3	237.8	240.7	225.4	232.4
75°	182.2	178.4	181.7	168.9	174.7
77.5°	124.1	127.0	124.9	118.1	122.0
80°	81.9	79.6	79.6	75.7	76.5
82.5°	47.8	45.5	44.9	43.6	45.5
85°	22.3	21.7	22.1	21.5	20.7
87.5°	8.1	8.3	8.3	7.9	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)