

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: P589235

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-93-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589235
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-93-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

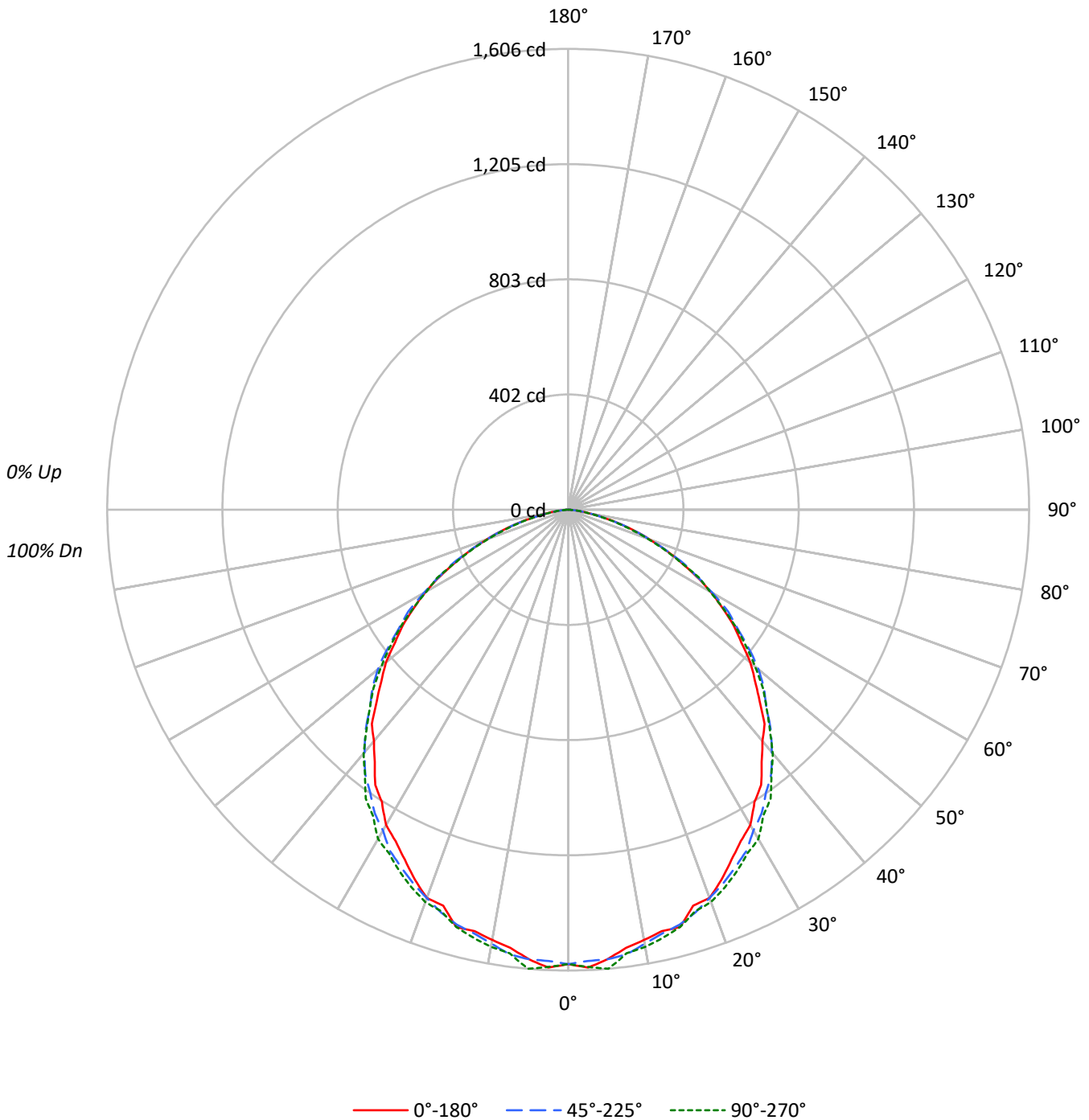
Lumens per Lamp: N/A
Luminaire Lumens: 3991.0 lumens
Efficiency: N/A
Efficacy: 119.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589235

CATALOG NUMBER: FMR-24-2-LD4-2STD-40-UNV-93-96-EDD

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°	4261	4261	4261
5°	4247	4249	4338
10°	4161	4197	4227
15°	4194	4171	4194
20°	4123	4123	4167
25°	3996	4084	4129
30°	3942	4011	4117
35°	3848	3949	4038
40°	3699	3877	3894
45°	3587	3715	3720
50°	3469	3626	3556
55°	3306	3370	3346
60°	3091	3122	3066
65°	2756	2826	2737
70°	2365	2373	2307
75°	1873	1868	1797
80°	1255	1220	1172
85°	682	676	630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.0	3.7
10°-20°	422.2	10.6
20°-30°	632.5	15.8
30°-40°	749.6	18.8
40°-50°	751.0	18.8
50°-60°	637.5	16.0
60°-70°	429.8	10.8
70°-80°	188.8	4.7
80°-90°	30.7	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°	1203.6	30.2
0°-40°	1953.2	48.9
0°-60°	3341.7	83.7
0°-90°	3991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1584	1584	1584	1584	1584	
5°	1572	1569	1573	1568	1606	148
15°	1505	1488	1497	1505	1506	419
25°	1346	1353	1375	1393	1390	622
35°	1172	1175	1202	1230	1229	727
45°	943	960	976	1001	978	729
55°	705	700	718	713	713	627
65°	433	427	444	427	430	430
75°	180	176	180	167	173	193
85°	22	22	22	21	20	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1583.5	1583.5	1583.5	1583.5	1583.5
2.5°	1597.2	1585.2	1573.9	1587.0	1595.0
5°	1572.3	1568.6	1572.9	1568.2	1606.0
7.5°	1540.0	1554.1	1562.3	1557.2	1559.4
10°	1522.8	1517.9	1536.1	1548.8	1546.9
12.5°	1504.4	1511.8	1512.8	1526.5	1527.7
15°	1505.4	1488.0	1497.2	1505.0	1505.6
17.5°	1446.9	1465.8	1472.1	1489.9	1467.8
20°	1439.8	1426.1	1439.8	1458.0	1455.1
22.5°	1395.8	1380.5	1409.9	1426.1	1425.1
25°	1345.9	1353.3	1375.4	1393.4	1390.5
27.5°	1302.2	1310.8	1342.3	1367.0	1351.1
30°	1268.5	1264.2	1290.7	1312.8	1325.1
32.5°	1208.1	1223.7	1254.8	1276.6	1265.0
35°	1171.5	1175.0	1202.2	1230.0	1229.2
37.5°	1107.5	1123.7	1161.9	1169.7	1162.5
40°	1053.0	1069.1	1103.7	1112.0	1108.6
42.5°	1012.7	1015.5	1045.2	1054.8	1039.5
45°	942.6	960.1	976.1	1001.2	977.5
47.5°	882.9	891.0	925.4	932.1	919.7
50°	828.7	831.5	866.1	857.7	849.5
52.5°	760.6	772.6	792.1	790.4	780.8
55°	704.6	699.9	718.3	713.4	713.1
57.5°	637.3	645.5	660.6	652.8	640.4
60°	574.3	574.5	580.0	571.3	569.6
62.5°	504.2	506.6	507.9	497.0	514.6
65°	432.8	427.1	443.9	426.9	429.8
67.5°	367.2	370.1	368.4	357.8	361.9
70°	300.6	304.2	301.6	289.5	293.2
72.5°	239.6	235.1	238.0	222.9	229.8
75°	180.1	176.4	179.7	167.0	172.8
77.5°	122.7	125.5	123.5	116.7	120.6
80°	81.0	78.7	78.7	74.8	75.6
82.5°	47.2	45.0	44.4	43.1	45.0
85°	22.1	21.5	21.9	21.3	20.4
87.5°	8.0	8.2	8.2	7.8	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)