

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: P589251

Luminaire Tested: **FMR-24-2-LD4-2STD-50-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589251
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

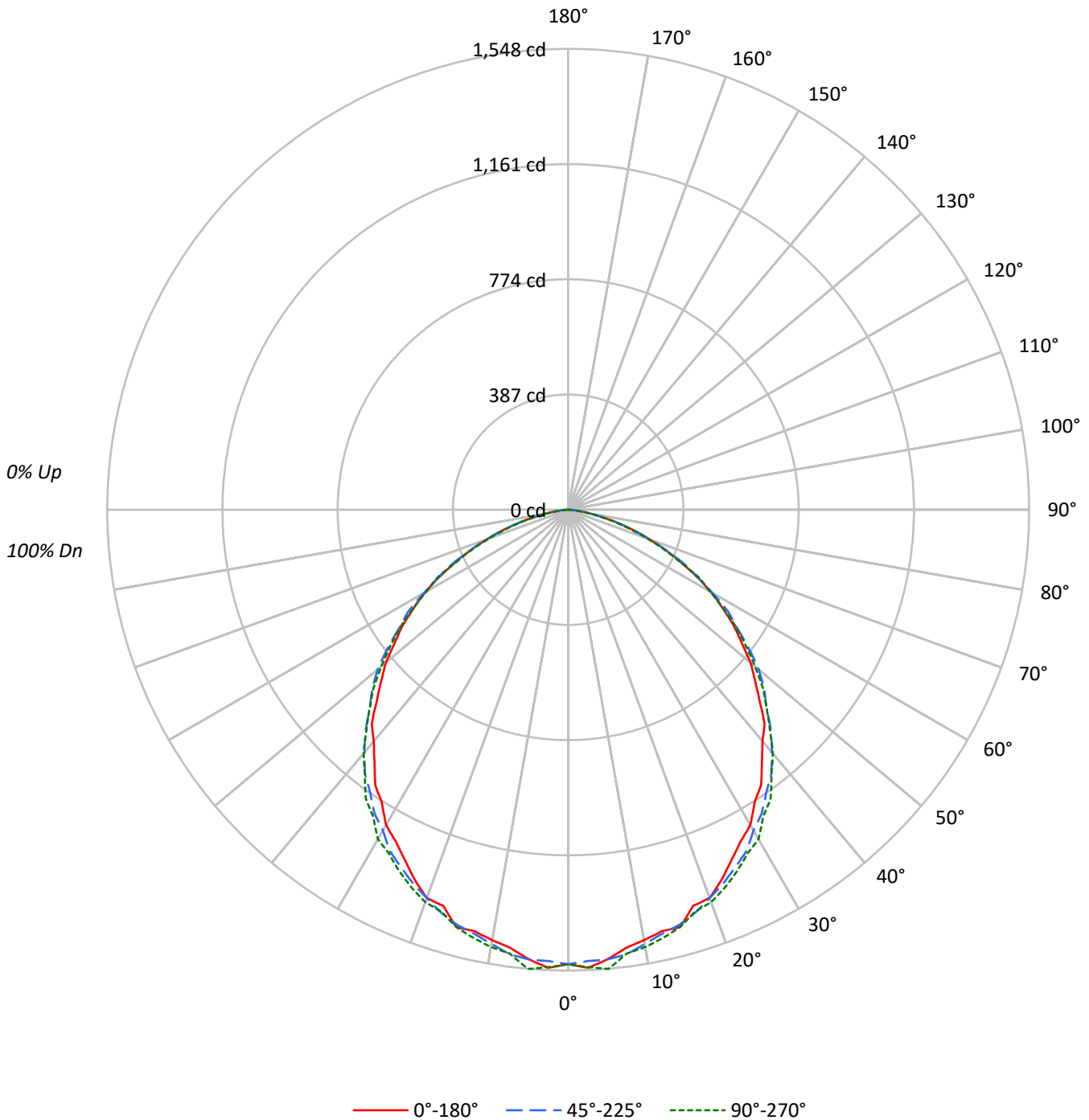
Lumens per Lamp: N/A
Luminaire Lumens: 3848.0 lumens
Efficiency: N/A
Efficacy: 115.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (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°	4109	4109	4109
5°	4095	4096	4183
10°	4012	4047	4076
15°	4044	4022	4044
20°	3975	3975	4018
25°	3853	3937	3981
30°	3800	3867	3970
35°	3711	3808	3893
40°	3566	3738	3755
45°	3459	3581	3587
50°	3345	3496	3429
55°	3187	3249	3226
60°	2980	3010	2956
65°	2657	2725	2639
70°	2280	2288	2224
75°	1806	1802	1732
80°	1210	1176	1130
85°	658	651	608



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.6	3.7
10°-20°	407.0	10.6
20°-30°	609.8	15.8
30°-40°	722.8	18.8
40°-50°	724.1	18.8
50°-60°	614.6	16.0
60°-70°	414.4	10.8
70°-80°	182.1	4.7
80°-90°	29.6	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°	1160.5	30.2
0°-40°	1883.2	48.9
0°-60°	3221.9	83.7
0°-90°	3848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3848.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1516	1512	1516	1512	1548	143
15°	1452	1435	1444	1451	1452	404
25°	1298	1305	1326	1344	1341	600
35°	1130	1133	1159	1186	1185	701
45°	909	926	941	965	942	703
55°	679	675	692	688	688	604
65°	417	412	428	412	414	415
75°	174	170	173	161	167	186
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°	1526.8	1526.8	1526.8	1526.8	1526.8
2.5°	1540.0	1528.4	1517.5	1530.1	1537.8
5°	1515.9	1512.4	1516.5	1512.0	1548.5
7.5°	1484.8	1498.4	1506.3	1501.4	1503.5
10°	1468.2	1463.5	1481.1	1493.3	1491.5
12.5°	1450.5	1457.6	1458.6	1471.8	1473.0
15°	1451.5	1434.7	1443.6	1451.1	1451.7
17.5°	1395.1	1413.2	1419.4	1436.5	1415.2
20°	1388.2	1375.0	1388.2	1405.8	1403.0
22.5°	1345.8	1331.0	1359.4	1375.0	1374.0
25°	1297.7	1304.8	1326.1	1343.5	1340.7
27.5°	1255.5	1263.8	1294.2	1318.0	1302.6
30°	1223.0	1218.9	1244.5	1265.8	1277.6
32.5°	1164.9	1179.8	1209.8	1230.9	1219.7
35°	1129.6	1132.9	1159.1	1185.9	1185.2
37.5°	1067.9	1083.4	1120.3	1127.8	1120.9
40°	1015.2	1030.8	1064.1	1072.2	1068.9
42.5°	976.4	979.2	1007.7	1017.0	1002.2
45°	908.8	925.7	941.1	965.4	942.5
47.5°	851.2	859.1	892.2	898.7	886.7
50°	799.0	801.7	835.1	827.0	819.1
52.5°	733.3	745.0	763.7	762.1	752.8
55°	679.3	674.8	692.5	687.8	687.6
57.5°	614.5	622.3	636.9	629.4	617.4
60°	553.7	553.9	559.3	550.8	549.2
62.5°	486.1	488.5	489.7	479.2	496.2
65°	417.3	411.8	428.0	411.6	414.4
67.5°	354.0	356.8	355.2	345.0	348.9
70°	289.8	293.3	290.8	279.1	282.7
72.5°	231.0	226.7	229.5	214.9	221.6
75°	173.7	170.1	173.3	161.1	166.6
77.5°	118.3	121.0	119.1	112.6	116.3
80°	78.1	75.9	75.9	72.2	72.9
82.5°	45.5	43.4	42.8	41.6	43.4
85°	21.3	20.7	21.1	20.5	19.7
87.5°	7.7	7.9	7.9	7.5	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)