

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: P589432

Luminaire Tested: **FMR-24-2-LD4-3LO-50-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589432  
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-LD4-3LO-50-UNV-80-87-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

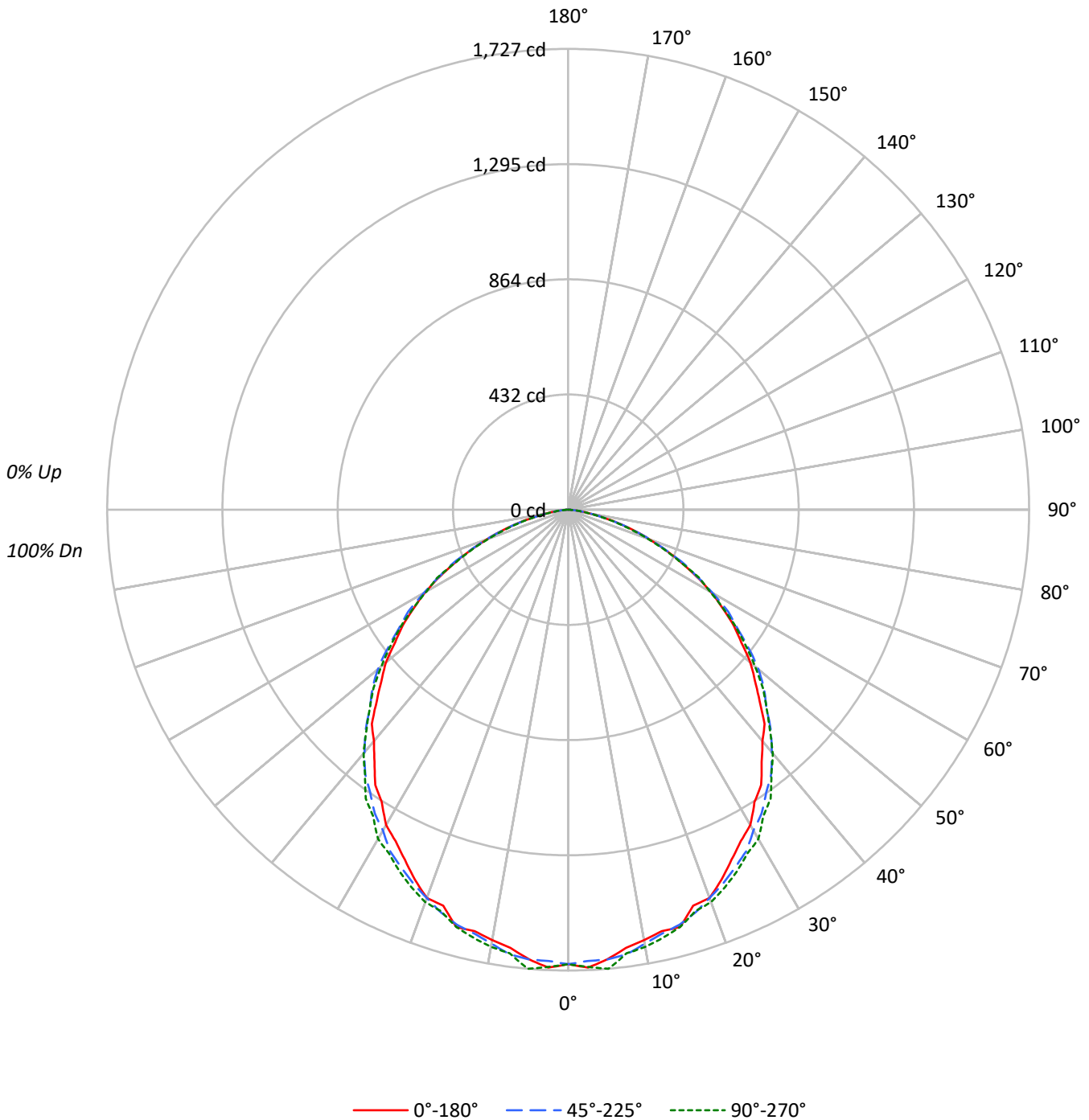
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4292.0 lumens  
Efficiency: N/A  
Efficacy: 122.3 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): 35.1  
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°	4583	4583	4583
5°	4568	4569	4665
10°	4475	4514	4546
15°	4510	4486	4511
20°	4434	4434	4481
25°	4298	4392	4440
30°	4239	4313	4428
35°	4139	4247	4343
40°	3978	4169	4188
45°	3857	3995	4000
50°	3731	3899	3825
55°	3555	3624	3598
60°	3324	3357	3297
65°	2964	3040	2943
70°	2543	2552	2481
75°	2014	2010	1932
80°	1350	1313	1261
85°	732	726	679



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.2	3.7
10°-20°	454.0	10.6
20°-30°	680.2	15.8
30°-40°	806.1	18.8
40°-50°	807.6	18.8
50°-60°	685.5	16.0
60°-70°	462.2	10.8
70°-80°	203.1	4.7
80°-90°	33.0	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°	1294.4	30.2
0°-40°	2100.5	48.9
0°-60°	3593.7	83.7
0°-90°	4292.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4292.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1703	1703	1703	1703	1703	
5°	1691	1687	1692	1686	1727	159
15°	1619	1600	1610	1618	1619	451
25°	1448	1455	1479	1498	1495	669
35°	1260	1264	1293	1323	1322	782
45°	1014	1032	1050	1077	1051	784
55°	758	753	772	767	767	674
65°	466	459	477	459	462	463
75°	194	190	193	180	186	208
85°	24	23	24	23	22	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1703.0	1703.0	1703.0	1703.0	1703.0
2.5°	1717.7	1704.7	1692.6	1706.7	1715.3
5°	1690.9	1686.9	1691.5	1686.5	1727.1
7.5°	1656.1	1671.3	1680.1	1674.6	1677.0
10°	1637.7	1632.4	1651.9	1665.6	1663.6
12.5°	1617.9	1625.8	1626.9	1641.6	1642.9
15°	1619.0	1600.3	1610.2	1618.5	1619.2
17.5°	1556.1	1576.3	1583.1	1602.3	1578.5
20°	1548.4	1533.7	1548.4	1568.0	1564.9
22.5°	1501.1	1484.6	1516.3	1533.7	1532.6
25°	1447.5	1455.4	1479.1	1498.5	1495.4
27.5°	1400.4	1409.6	1443.5	1470.1	1453.0
30°	1364.1	1359.5	1388.1	1411.8	1425.0
32.5°	1299.3	1316.0	1349.4	1372.9	1360.4
35°	1259.9	1263.6	1292.9	1322.8	1321.9
37.5°	1191.1	1208.5	1249.6	1257.9	1250.2
40°	1132.4	1149.7	1186.9	1195.9	1192.2
42.5°	1089.1	1092.1	1124.0	1134.4	1117.9
45°	1013.6	1032.5	1049.7	1076.7	1051.2
47.5°	949.4	958.2	995.2	1002.4	989.0
50°	891.2	894.2	931.4	922.4	913.6
52.5°	817.9	830.9	851.8	850.0	839.7
55°	757.7	752.6	772.4	767.2	766.9
57.5°	685.4	694.2	710.4	702.1	688.7
60°	617.6	617.9	623.8	614.3	612.6
62.5°	542.2	544.9	546.2	534.5	553.4
65°	465.5	459.3	477.4	459.1	462.2
67.5°	394.9	398.0	396.2	384.8	389.2
70°	323.2	327.2	324.3	311.3	315.3
72.5°	257.7	252.9	255.9	239.7	247.1
75°	193.7	189.8	193.3	179.6	185.8
77.5°	131.9	135.0	132.8	125.6	129.7
80°	87.1	84.7	84.7	80.5	81.4
82.5°	50.8	48.4	47.7	46.4	48.4
85°	23.7	23.1	23.5	22.9	22.0
87.5°	8.6	8.8	8.8	8.4	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)