

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: P589414

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-82-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589414
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-40-UNV-82-85-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

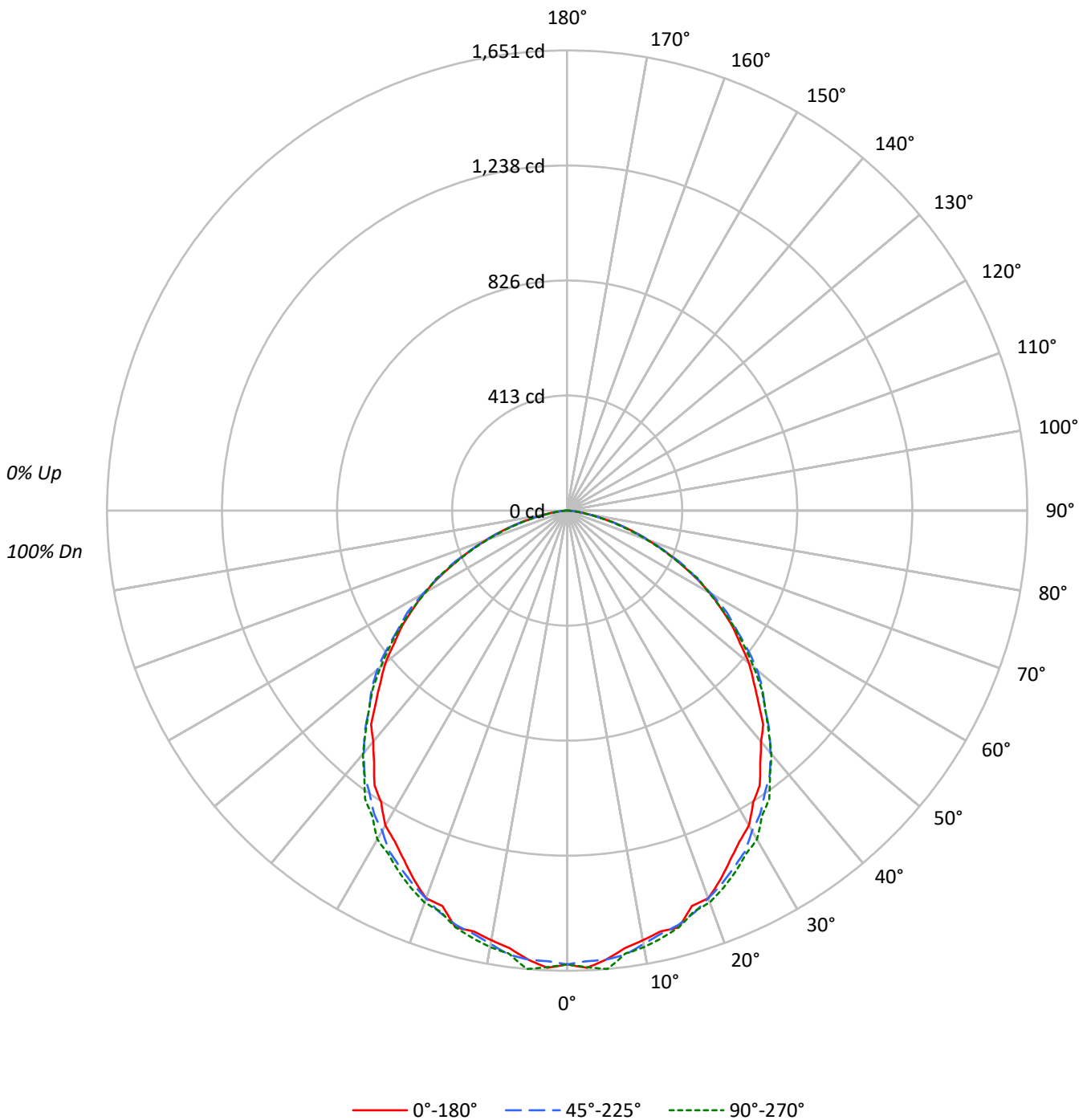
Lumens per Lamp: N/A
Luminaire Lumens: 4103.0 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4381	4381	4381
5°	4366	4368	4460
10°	4278	4315	4345
15°	4312	4288	4312
20°	4239	4239	4284
25°	4108	4198	4244
30°	4052	4123	4233
35°	3957	4060	4151
40°	3803	3986	4004
45°	3688	3819	3824
50°	3566	3728	3656
55°	3398	3464	3440
60°	3178	3209	3152
65°	2833	2905	2813
70°	2431	2439	2371
75°	1926	1921	1847
80°	1289	1254	1206
85°	701	695	648



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.1	3.7
10°-20°	434.0	10.6
20°-30°	650.2	15.8
30°-40°	770.6	18.8
40°-50°	772.1	18.8
50°-60°	655.4	16.0
60°-70°	441.8	10.8
70°-80°	194.1	4.7
80°-90°	31.6	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°	1237.4	30.2
0°-40°	2008.0	48.9
0°-60°	3435.4	83.7
0°-90°	4103.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4103.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1628	1628	1628	1628	1628	
5°	1616	1613	1617	1612	1651	152
15°	1548	1530	1539	1547	1548	431
25°	1384	1391	1414	1432	1430	640
35°	1204	1208	1236	1264	1264	748
45°	969	987	1004	1029	1005	750
55°	724	720	738	733	733	644
65°	445	439	456	439	442	443
75°	185	181	185	172	178	198
85°	23	22	22	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1628.0	1628.0	1628.0	1628.0	1628.0
2.5°	1642.0	1629.6	1618.1	1631.5	1639.7
5°	1616.4	1612.6	1617.0	1612.2	1651.1
7.5°	1583.2	1597.7	1606.1	1600.9	1603.2
10°	1565.5	1560.5	1579.2	1592.2	1590.3
12.5°	1546.6	1554.2	1555.2	1569.3	1570.6
15°	1547.7	1529.8	1539.3	1547.3	1547.9
17.5°	1487.6	1506.9	1513.4	1531.7	1509.0
20°	1480.2	1466.1	1480.2	1498.9	1496.0
22.5°	1435.0	1419.2	1449.5	1466.1	1465.1
25°	1383.7	1391.3	1414.0	1432.5	1429.5
27.5°	1338.7	1347.6	1379.9	1405.4	1389.0
30°	1304.1	1299.6	1327.0	1349.7	1362.3
32.5°	1242.0	1258.0	1290.0	1312.5	1300.5
35°	1204.4	1208.0	1236.0	1264.5	1263.7
37.5°	1138.6	1155.2	1194.5	1202.5	1195.2
40°	1082.5	1099.1	1134.6	1143.3	1139.7
42.5°	1041.1	1044.0	1074.5	1084.4	1068.6
45°	969.0	987.1	1003.5	1029.3	1004.9
47.5°	907.6	916.0	951.3	958.3	945.5
50°	851.9	854.9	890.4	881.8	873.4
52.5°	781.9	794.3	814.3	812.6	802.7
55°	724.3	719.5	738.4	733.4	733.2
57.5°	655.2	663.6	679.1	671.2	658.3
60°	590.4	590.7	596.3	587.3	585.6
62.5°	518.3	520.9	522.1	511.0	529.1
65°	445.0	439.1	456.3	438.9	441.8
67.5°	377.5	380.5	378.8	367.8	372.0
70°	309.0	312.8	310.0	297.6	301.4
72.5°	246.3	241.7	244.7	229.1	236.3
75°	185.2	181.4	184.8	171.7	177.6
77.5°	126.1	129.1	127.0	120.0	124.0
80°	83.2	80.9	80.9	76.9	77.8
82.5°	48.6	46.2	45.6	44.4	46.2
85°	22.7	22.1	22.5	21.9	21.0
87.5°	8.2	8.4	8.4	8.0	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)