

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: P589032

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-82-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589032
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-LD4-2HI-40-UNV-82-87-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

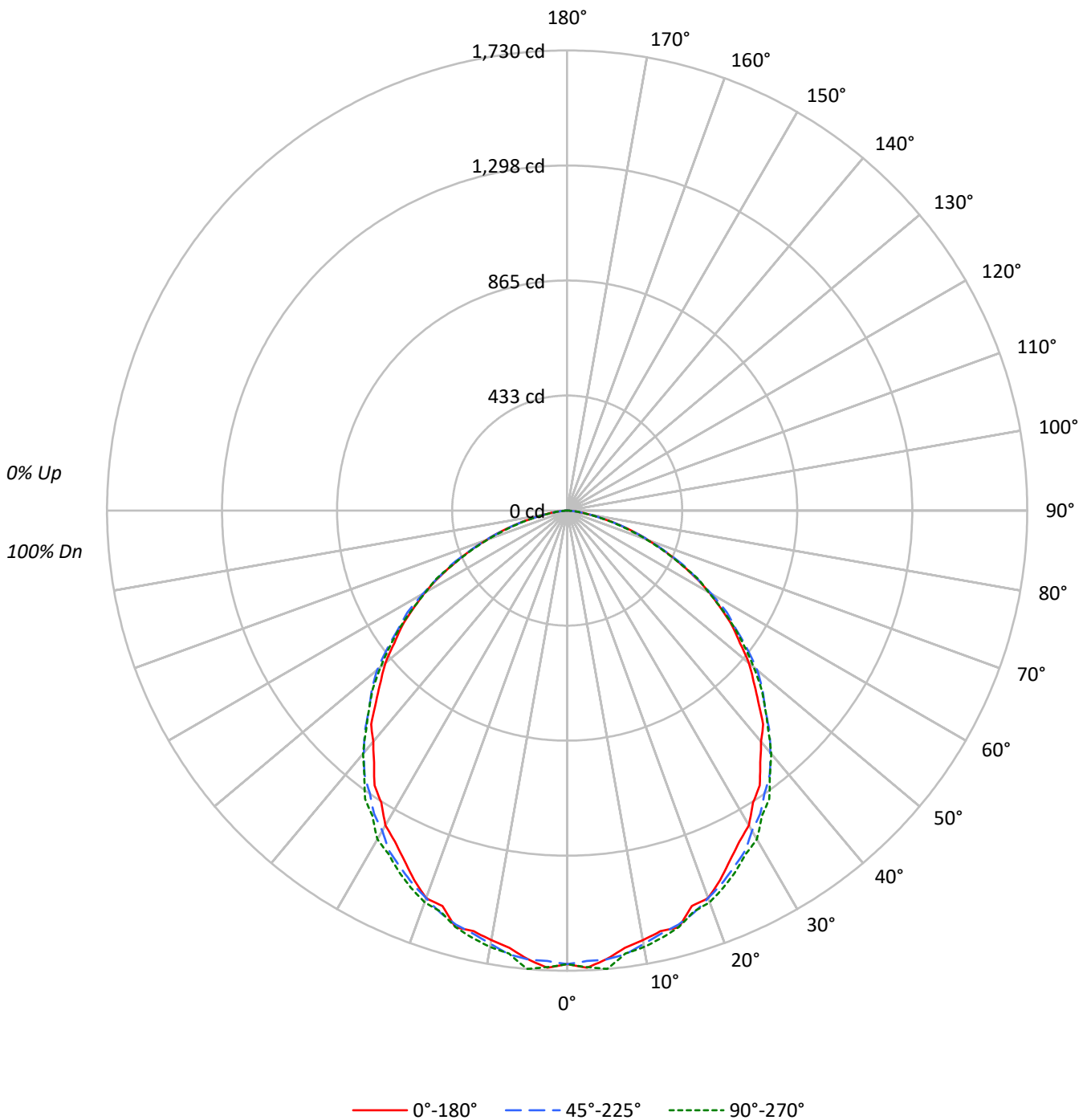
Lumens per Lamp: N/A
Luminaire Lumens: 4298.0 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	4589	4589	4589
5°	4574	4576	4672
10°	4481	4520	4552
15°	4517	4492	4517
20°	4440	4440	4488
25°	4304	4398	4446
30°	4245	4319	4434
35°	4145	4253	4349
40°	3984	4175	4194
45°	3863	4000	4006
50°	3736	3905	3830
55°	3560	3629	3603
60°	3329	3362	3301
65°	2968	3044	2947
70°	2547	2555	2484
75°	2017	2012	1935
80°	1351	1314	1263
85°	735	729	679



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.4	3.7
10°-20°	454.6	10.6
20°-30°	681.1	15.8
30°-40°	807.3	18.8
40°-50°	808.8	18.8
50°-60°	686.5	16.0
60°-70°	462.8	10.8
70°-80°	203.4	4.7
80°-90°	33.1	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°	1296.2	30.2
0°-40°	2103.4	48.9
0°-60°	3598.7	83.7
0°-90°	4298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4298.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1705	1705	1705	1705	1705	
5°	1693	1689	1694	1689	1730	160
15°	1621	1602	1612	1621	1621	452
25°	1450	1457	1481	1501	1498	670
35°	1262	1265	1295	1325	1324	783
45°	1015	1034	1051	1078	1053	785
55°	759	754	774	768	768	675
65°	466	460	478	460	463	464
75°	194	190	194	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°	1705.3	1705.3	1705.3	1705.3	1705.3
2.5°	1720.1	1707.1	1695.0	1709.1	1717.7
5°	1693.2	1689.3	1693.9	1688.8	1729.6
7.5°	1658.4	1673.6	1682.4	1676.9	1679.4
10°	1639.9	1634.7	1654.3	1667.9	1665.9
12.5°	1620.1	1628.1	1629.2	1643.9	1645.2
15°	1621.2	1602.5	1612.4	1620.8	1621.4
17.5°	1558.3	1578.5	1585.3	1604.5	1580.7
20°	1550.5	1535.8	1550.5	1570.1	1567.1
22.5°	1503.2	1486.7	1518.4	1535.8	1534.7
25°	1449.5	1457.4	1481.2	1500.6	1497.5
27.5°	1402.4	1411.6	1445.5	1472.2	1455.0
30°	1366.0	1361.4	1390.0	1413.8	1427.0
32.5°	1301.1	1317.8	1351.3	1374.8	1362.3
35°	1261.7	1265.4	1294.7	1324.6	1323.8
37.5°	1192.7	1210.1	1251.3	1259.7	1252.0
40°	1134.0	1151.4	1188.6	1197.6	1193.8
42.5°	1090.6	1093.7	1125.6	1135.9	1119.4
45°	1015.1	1034.0	1051.2	1078.2	1052.7
47.5°	950.8	959.6	996.6	1003.8	990.4
50°	892.4	895.5	932.7	923.7	914.9
52.5°	819.1	832.1	853.0	851.2	840.9
55°	758.8	753.7	773.5	768.2	768.0
57.5°	686.3	695.1	711.4	703.1	689.6
60°	618.5	618.7	624.7	615.2	613.4
62.5°	543.0	545.6	546.9	535.3	554.2
65°	466.1	460.0	478.0	459.7	462.8
67.5°	395.5	398.5	396.8	385.3	389.7
70°	323.7	327.6	324.8	311.8	315.7
72.5°	258.1	253.2	256.3	240.0	247.5
75°	194.0	190.0	193.5	179.9	186.1
77.5°	132.1	135.2	133.0	125.7	129.9
80°	87.2	84.8	84.8	80.6	81.5
82.5°	50.9	48.4	47.8	46.5	48.4
85°	23.8	23.1	23.6	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)