

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: P589571

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589571
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-LD4-4HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

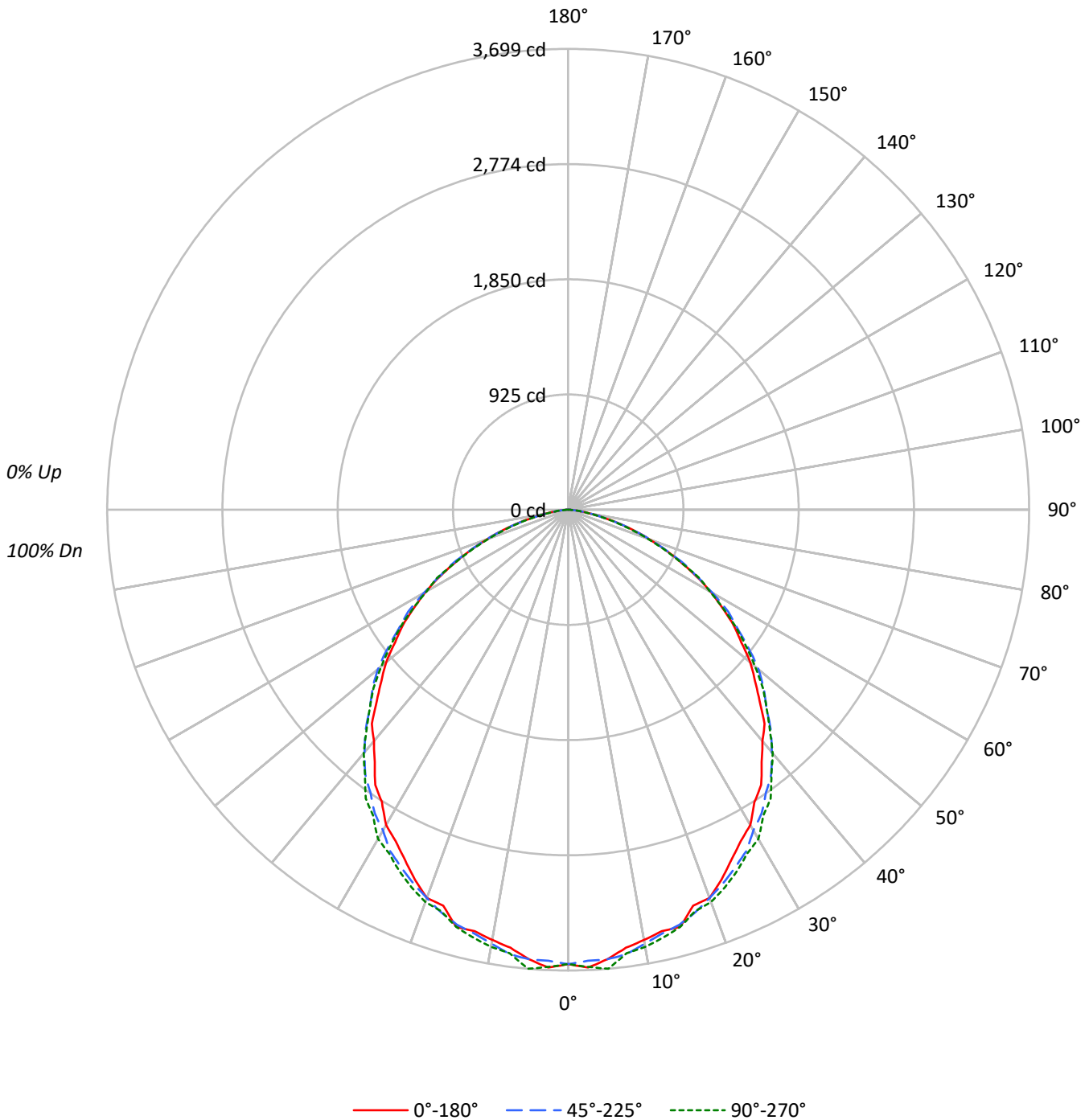
Lumens per Lamp: N/A
Luminaire Lumens: 9191.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	9813	9813	9813
5°	9781	9785	9991
10°	9583	9666	9735
15°	9658	9606	9660
20°	9495	9495	9596
25°	9203	9405	9508
30°	9077	9236	9482
35°	8863	9095	9299
40°	8518	8929	8968
45°	8260	8555	8567
50°	7989	8350	8190
55°	7613	7760	7705
60°	7118	7189	7060
65°	6347	6509	6302
70°	5446	5464	5312
75°	4313	4303	4137
80°	2890	2810	2700
85°	1572	1556	1454



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.0	3.7
10°-20°	972.2	10.6
20°-30°	1456.6	15.8
30°-40°	1726.3	18.8
40°-50°	1729.5	18.8
50°-60°	1468.1	16.0
60°-70°	989.8	10.8
70°-80°	434.9	4.7
80°-90°	70.7	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°	2771.8	30.2
0°-40°	4498.1	48.9
0°-60°	7695.7	83.7
0°-90°	9191.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9191.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3647	3647	3647	3647	3647	
5°	3621	3612	3622	3611	3699	341
15°	3467	3427	3448	3466	3467	966
25°	3100	3117	3167	3209	3202	1433
35°	2698	2706	2769	2833	2831	1675
45°	2171	2211	2248	2306	2251	1679
55°	1623	1612	1654	1643	1642	1443
65°	997	984	1022	983	990	991
75°	415	406	414	385	398	445
85°	51	49	50	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3646.8	3646.8	3646.8	3646.8	3646.8
2.5°	3678.3	3650.5	3624.6	3654.8	3673.1
5°	3620.9	3612.4	3622.3	3611.4	3698.6
7.5°	3546.5	3579.0	3597.8	3586.0	3591.2
10°	3506.9	3495.6	3537.5	3566.7	3562.5
12.5°	3464.5	3481.5	3483.8	3515.4	3518.2
15°	3466.9	3426.9	3448.1	3465.9	3467.4
17.5°	3332.2	3375.5	3390.1	3431.1	3380.3
20°	3315.7	3284.2	3315.7	3357.7	3351.1
22.5°	3214.5	3179.2	3247.0	3284.2	3281.8
25°	3099.6	3116.6	3167.4	3208.9	3202.3
27.5°	2998.9	3018.6	3091.2	3148.1	3111.4
30°	2921.2	2911.3	2972.5	3023.3	3051.6
32.5°	2782.3	2818.1	2889.6	2940.0	2913.2
35°	2698.0	2706.0	2768.6	2832.7	2830.8
37.5°	2550.6	2587.8	2675.9	2693.8	2677.3
40°	2424.9	2462.1	2541.7	2561.0	2553.0
42.5°	2332.1	2338.7	2407.0	2429.1	2393.8
45°	2170.6	2211.1	2247.9	2305.8	2251.1
47.5°	2033.1	2052.0	2131.1	2146.6	2117.9
50°	1908.4	1915.0	1994.5	1975.2	1956.4
52.5°	1751.6	1779.4	1824.1	1820.3	1798.2
55°	1622.6	1611.7	1654.1	1642.8	1642.3
57.5°	1467.6	1486.5	1521.3	1503.4	1474.7
60°	1322.6	1323.1	1335.8	1315.6	1311.8
62.5°	1161.1	1166.8	1169.6	1144.6	1185.1
65°	996.8	983.6	1022.2	983.1	989.7
67.5°	845.7	852.2	848.5	824.0	833.4
70°	692.2	700.6	694.5	666.7	675.2
72.5°	551.8	541.5	548.1	513.2	529.2
75°	414.8	406.3	413.9	384.7	397.9
77.5°	282.5	289.1	284.4	268.9	277.8
80°	186.5	181.3	181.3	172.3	174.2
82.5°	108.8	103.6	102.2	99.3	103.6
85°	50.9	49.4	50.4	49.0	47.1
87.5°	18.4	18.8	18.8	17.9	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)