

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: P589644

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-82-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589644
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-50-UNV-82-97-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

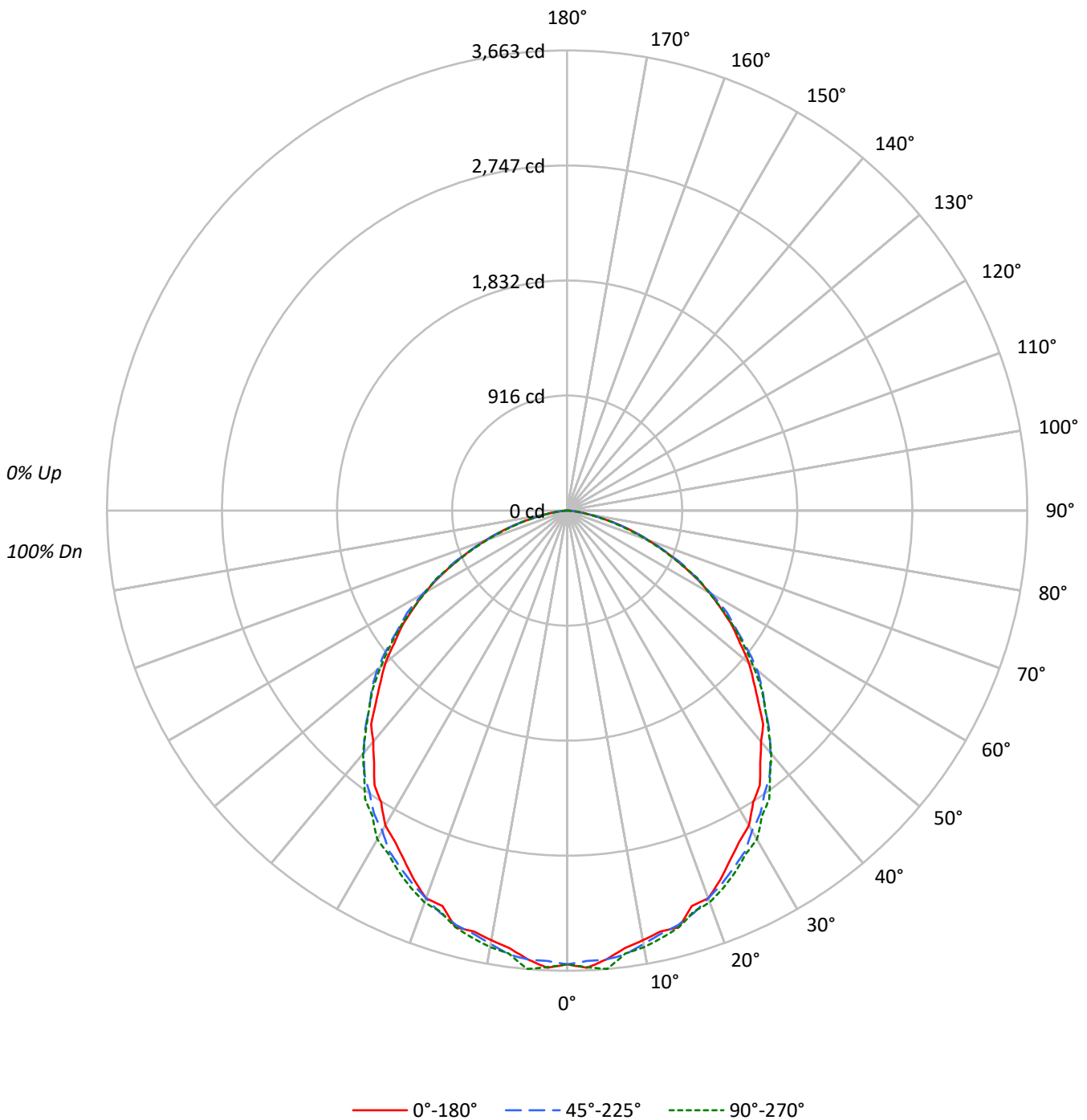
Lumens per Lamp: N/A
Luminaire Lumens: 9102.0 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	9718	9718	9718
5°	9686	9690	9894
10°	9490	9573	9640
15°	9565	9513	9566
20°	9403	9403	9503
25°	9114	9314	9416
30°	8989	9147	9390
35°	8777	9007	9209
40°	8436	8842	8881
45°	8181	8472	8484
50°	7912	8269	8111
55°	7538	7685	7630
60°	7049	7120	6992
65°	6285	6446	6241
70°	5393	5412	5261
75°	4271	4262	4096
80°	2862	2782	2673
85°	1556	1541	1439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	339.7	3.7
10°-20°	962.8	10.6
20°-30°	1442.4	15.8
30°-40°	1709.6	18.8
40°-50°	1712.7	18.8
50°-60°	1453.8	16.0
60°-70°	980.2	10.8
70°-80°	430.7	4.7
80°-90°	70.0	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°	2744.9	30.2
0°-40°	4454.5	48.9
0°-60°	7621.1	83.7
0°-90°	9102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9102.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3611	3611	3611	3611	3611	
5°	3586	3577	3587	3576	3663	338
15°	3433	3394	3415	3432	3434	957
25°	3070	3086	3137	3178	3171	1419
35°	2672	2680	2742	2805	2803	1659
45°	2150	2190	2226	2283	2229	1663
55°	1607	1596	1638	1627	1626	1429
65°	987	974	1012	974	980	982
75°	411	402	410	381	394	440
85°	50	49	50	48	47	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3611.4	3611.4	3611.4	3611.4	3611.4
2.5°	3642.7	3615.2	3589.5	3619.4	3637.6
5°	3585.8	3577.4	3587.2	3576.5	3662.7
7.5°	3512.1	3544.3	3562.9	3551.3	3556.4
10°	3473.0	3461.8	3503.3	3532.2	3528.0
12.5°	3431.0	3447.8	3450.1	3481.3	3484.1
15°	3433.3	3393.7	3414.7	3432.4	3433.8
17.5°	3300.0	3342.9	3357.3	3397.9	3347.5
20°	3283.6	3252.4	3283.6	3325.1	3318.6
22.5°	3183.4	3148.4	3215.6	3252.4	3250.1
25°	3069.6	3086.4	3136.8	3177.8	3171.3
27.5°	2969.8	2989.4	3061.2	3117.6	3081.3
30°	2892.9	2883.1	2943.7	2994.1	3022.0
32.5°	2755.3	2790.8	2861.6	2911.5	2885.0
35°	2671.9	2679.8	2741.8	2805.2	2803.4
37.5°	2525.9	2562.7	2649.9	2667.7	2651.3
40°	2401.4	2438.2	2517.1	2536.2	2528.2
42.5°	2309.6	2316.1	2383.7	2405.6	2370.6
45°	2149.6	2189.7	2226.1	2283.4	2229.3
47.5°	2013.5	2032.1	2110.4	2125.8	2097.4
50°	1889.9	1896.4	1975.2	1956.1	1937.4
52.5°	1734.6	1762.1	1806.4	1802.7	1780.8
55°	1606.8	1596.1	1638.1	1626.9	1626.4
57.5°	1453.4	1472.1	1506.6	1488.9	1460.4
60°	1309.8	1310.3	1322.9	1302.8	1299.1
62.5°	1149.9	1155.5	1158.3	1133.6	1173.7
65°	987.1	974.1	1012.3	973.6	980.1
67.5°	837.5	844.0	840.3	816.0	825.3
70°	685.5	693.8	687.8	660.3	668.7
72.5°	546.5	536.2	542.8	508.3	524.1
75°	410.8	402.4	409.9	381.0	394.0
77.5°	279.8	286.3	281.6	266.3	275.1
80°	184.7	179.5	179.5	170.7	172.5
82.5°	107.7	102.6	101.2	98.4	102.6
85°	50.4	49.0	49.9	48.5	46.6
87.5°	18.2	18.7	18.7	17.7	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)