

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: P589610

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-82-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589610
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-40-UNV-82-94-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

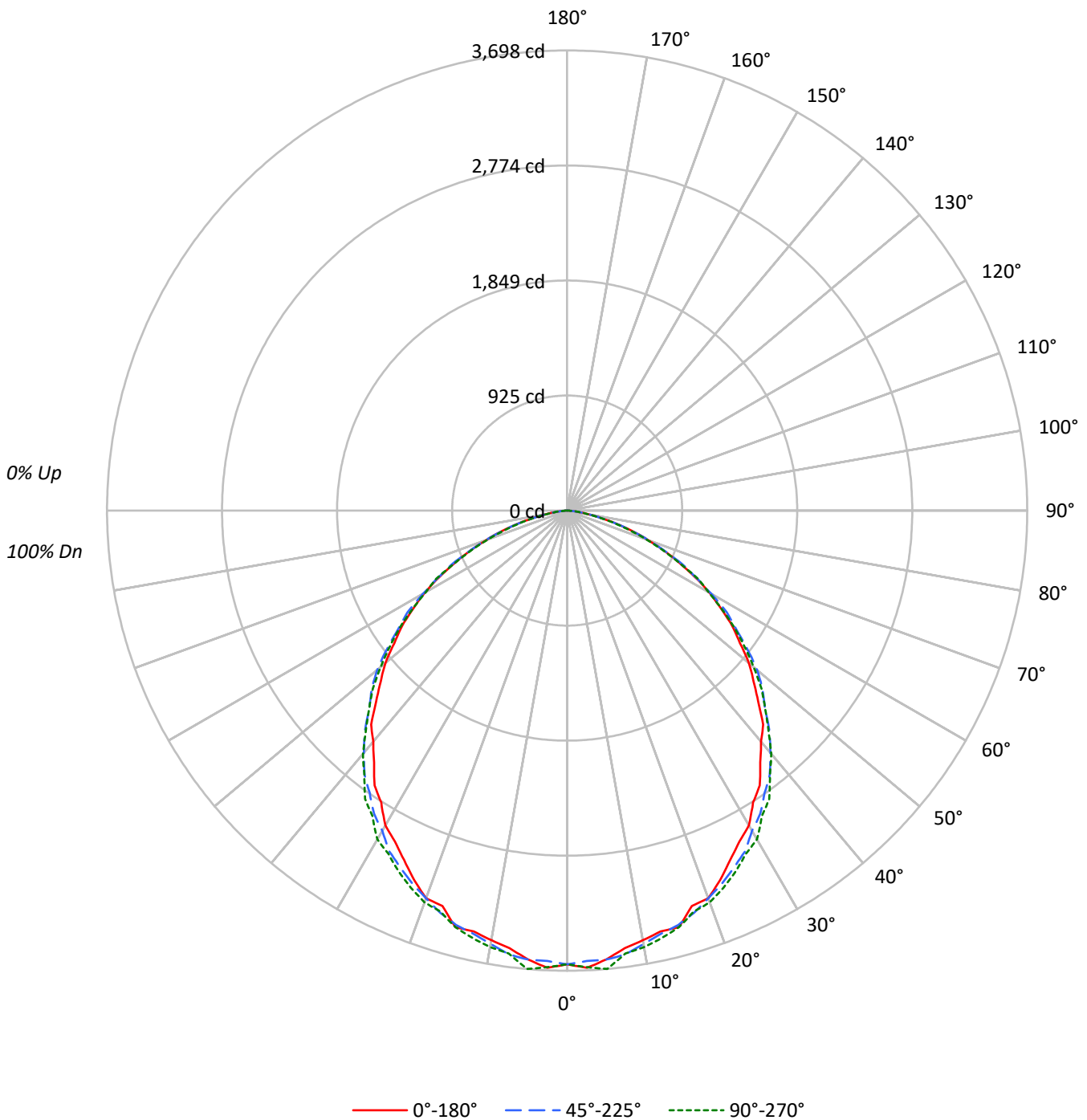
Lumens per Lamp: N/A
Luminaire Lumens: 9189.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9811	9811	9811
5°	9779	9783	9988
10°	9581	9664	9732
15°	9656	9604	9658
20°	9493	9493	9594
25°	9201	9402	9506
30°	9075	9234	9480
35°	8861	9093	9297
40°	8516	8926	8966
45°	8259	8553	8565
50°	7988	8348	8189
55°	7611	7758	7704
60°	7117	7188	7058
65°	6346	6507	6301
70°	5445	5463	5312
75°	4312	4302	4136
80°	2889	2808	2700
85°	1568	1556	1454



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.0	3.7
10°-20°	972.0	10.6
20°-30°	1456.2	15.8
30°-40°	1725.9	18.8
40°-50°	1729.1	18.8
50°-60°	1467.7	16.0
60°-70°	989.6	10.8
70°-80°	434.8	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°	2771.2	30.2
0°-40°	4497.1	48.9
0°-60°	7694.0	83.7
0°-90°	9189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9189.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3646	3646	3646	3646	3646	
5°	3620	3612	3622	3611	3698	341
15°	3466	3426	3447	3465	3467	966
25°	3099	3116	3167	3208	3202	1433
35°	2697	2705	2768	2832	2830	1675
45°	2170	2211	2247	2305	2251	1679
55°	1622	1611	1654	1642	1642	1443
65°	997	983	1022	983	990	991
75°	415	406	414	385	398	444
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°	3646.0	3646.0	3646.0	3646.0	3646.0
2.5°	3677.5	3649.7	3623.8	3654.0	3672.3
5°	3620.1	3611.6	3621.5	3610.7	3697.7
7.5°	3545.7	3578.2	3597.0	3585.2	3590.4
10°	3506.2	3494.9	3536.7	3565.9	3561.7
12.5°	3463.8	3480.7	3483.1	3514.6	3517.4
15°	3466.1	3426.1	3447.3	3465.2	3466.6
17.5°	3331.5	3374.8	3389.4	3430.4	3379.5
20°	3315.0	3283.5	3315.0	3356.9	3350.3
22.5°	3213.8	3178.5	3246.3	3283.5	3281.1
25°	3099.0	3115.9	3166.7	3208.2	3201.6
27.5°	2998.2	3018.0	3090.5	3147.4	3110.7
30°	2920.5	2910.7	2971.8	3022.7	3050.9
32.5°	2781.7	2817.4	2889.0	2939.4	2912.5
35°	2697.4	2705.4	2768.0	2832.0	2830.2
37.5°	2550.1	2587.2	2675.3	2693.2	2676.7
40°	2424.4	2461.6	2541.1	2560.4	2552.4
42.5°	2331.6	2338.2	2406.5	2428.6	2393.3
45°	2170.2	2210.6	2247.4	2305.3	2250.7
47.5°	2032.7	2051.5	2130.6	2146.2	2117.4
50°	1908.0	1914.5	1994.1	1974.8	1956.0
52.5°	1751.2	1779.0	1823.7	1819.9	1797.8
55°	1622.2	1611.4	1653.7	1642.4	1642.0
57.5°	1467.3	1486.2	1521.0	1503.1	1474.4
60°	1322.3	1322.8	1335.5	1315.3	1311.5
62.5°	1160.9	1166.5	1169.3	1144.4	1184.9
65°	996.6	983.4	1022.0	982.9	989.5
67.5°	845.5	852.1	848.3	823.8	833.2
70°	692.0	700.5	694.4	666.6	675.1
72.5°	551.7	541.4	548.0	513.1	529.1
75°	414.7	406.3	413.8	384.6	397.8
77.5°	282.5	289.0	284.3	268.8	277.7
80°	186.4	181.2	181.2	172.3	174.2
82.5°	108.7	103.6	102.2	99.3	103.6
85°	50.8	49.4	50.4	49.0	47.1
87.5°	18.4	18.8	18.8	17.9	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)