

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: P589642

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-82-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589642
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-82-94-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

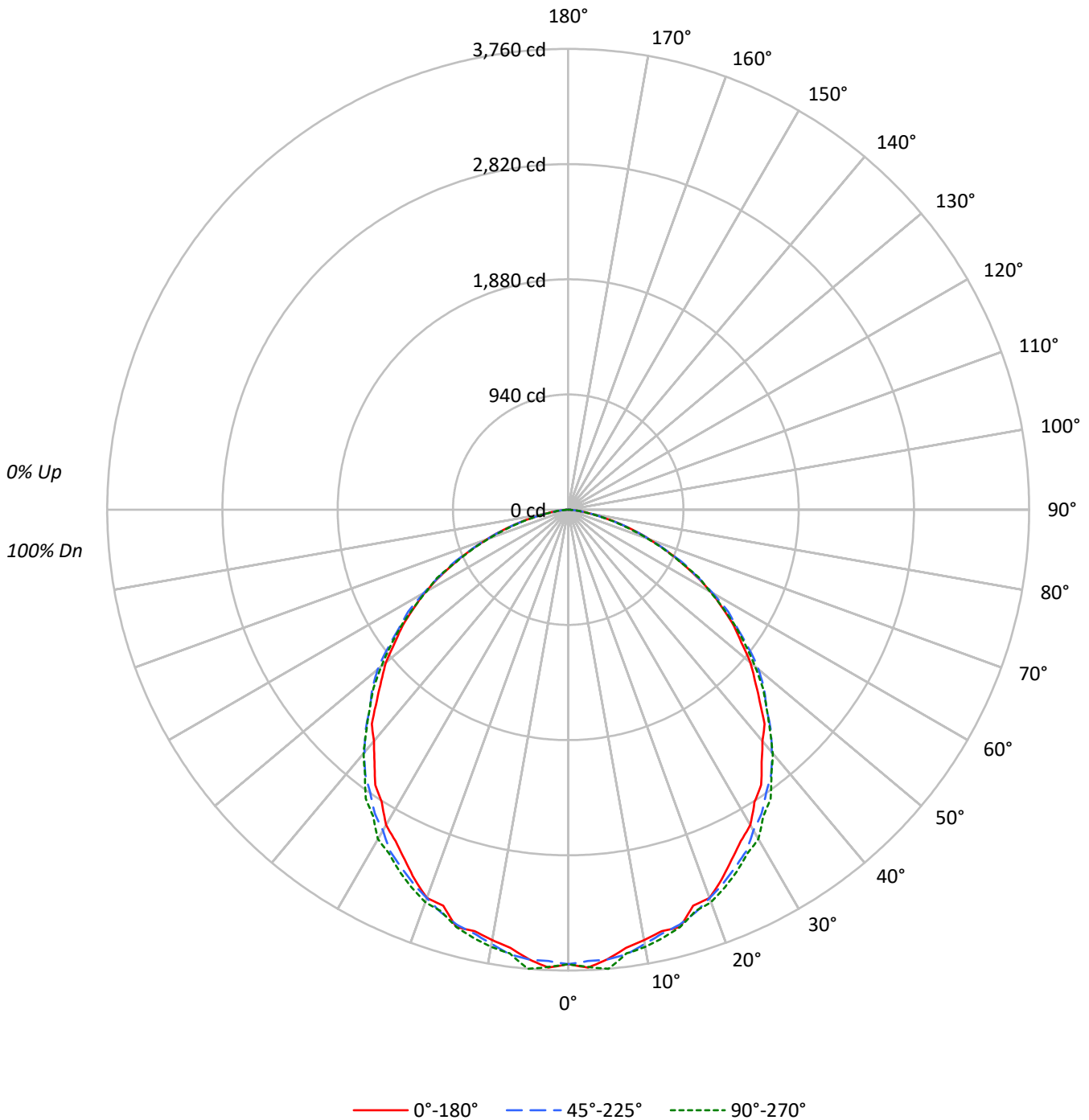
Lumens per Lamp: N/A
Luminaire Lumens: 9345.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589642

CATALOG NUMBER: FMR-24-2-LD4-4HI-50-UNV-82-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589642

CATALOG NUMBER: FMR-24-2-LD4-4HI-50-UNV-82-94-EDD

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°	9978	9978	9978
5°	9945	9949	10158
10°	9743	9828	9898
15°	9820	9767	9822
20°	9654	9654	9757
25°	9358	9562	9667
30°	9229	9391	9641
35°	9012	9247	9455
40°	8661	9078	9118
45°	8399	8698	8711
50°	8123	8490	8328
55°	7740	7890	7834
60°	7238	7310	7178
65°	6453	6618	6408
70°	5537	5556	5401
75°	4386	4375	4206
80°	2938	2856	2744
85°	1596	1581	1479



TEST NUMBER: P589642

CATALOG NUMBER: FMR-24-2-LD4-4HI-50-UNV-82-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.8	3.7
10°-20°	988.5	10.6
20°-30°	1481.0	15.8
30°-40°	1755.2	18.8
40°-50°	1758.5	18.8
50°-60°	1492.6	16.0
60°-70°	1006.3	10.8
70°-80°	442.2	4.7
80°-90°	71.8	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°	2818.2	30.2
0°-40°	4573.5	48.9
0°-60°	7824.6	83.7
0°-90°	9345.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9345.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3708	3708	3708	3708	3708	
5°	3682	3673	3683	3672	3760	347
15°	3525	3484	3506	3524	3526	982
25°	3152	3169	3220	3263	3256	1457
35°	2743	2751	2815	2880	2878	1703
45°	2207	2248	2286	2344	2289	1707
55°	1650	1639	1682	1670	1670	1468
65°	1014	1000	1039	1000	1006	1008
75°	422	413	421	391	404	452
85°	52	50	51	50	48	75
90°	0	0	0	0	0	



TEST NUMBER: P589642

CATALOG NUMBER: FMR-24-2-LD4-4HI-50-UNV-82-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3707.9	3707.9	3707.9	3707.9	3707.9
2.5°	3739.9	3711.7	3685.4	3716.0	3734.7
5°	3681.5	3672.9	3683.0	3672.0	3760.5
7.5°	3605.9	3638.9	3658.1	3646.1	3651.4
10°	3565.7	3554.2	3596.8	3626.5	3622.2
12.5°	3522.6	3539.8	3542.2	3574.3	3577.2
15°	3525.0	3484.3	3505.8	3524.0	3525.5
17.5°	3388.1	3432.1	3446.9	3488.6	3436.9
20°	3371.3	3339.2	3371.3	3413.9	3407.2
22.5°	3268.4	3232.5	3301.4	3339.2	3336.8
25°	3151.6	3168.8	3220.5	3262.6	3255.9
27.5°	3049.1	3069.2	3142.9	3200.9	3163.5
30°	2970.1	2960.1	3022.3	3074.0	3102.7
32.5°	2828.9	2865.3	2938.0	2989.3	2962.0
35°	2743.2	2751.3	2815.0	2880.1	2878.2
37.5°	2593.3	2631.2	2720.7	2738.9	2722.1
40°	2465.5	2503.3	2584.3	2603.9	2595.7
42.5°	2371.2	2377.9	2447.3	2469.8	2433.9
45°	2207.0	2248.2	2285.5	2344.4	2288.9
47.5°	2067.2	2086.4	2166.8	2182.6	2153.4
50°	1940.3	1947.0	2028.0	2008.3	1989.2
52.5°	1780.9	1809.2	1854.6	1850.8	1828.3
55°	1649.7	1638.7	1681.8	1670.3	1669.9
57.5°	1492.2	1511.4	1546.8	1528.6	1499.4
60°	1344.8	1345.3	1358.2	1337.6	1333.8
62.5°	1180.6	1186.3	1189.2	1163.8	1205.0
65°	1013.5	1000.1	1039.3	999.6	1006.3
67.5°	859.8	866.5	862.7	837.8	847.4
70°	703.8	712.4	706.1	677.9	686.5
72.5°	561.1	550.6	557.3	521.8	538.1
75°	421.8	413.2	420.8	391.1	404.5
77.5°	287.2	293.9	289.2	273.4	282.5
80°	189.6	184.3	184.3	175.2	177.1
82.5°	110.6	105.3	103.9	101.0	105.3
85°	51.7	50.3	51.2	49.8	47.9
87.5°	18.7	19.1	19.1	18.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)