

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: P589614

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-93-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589614
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-93-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

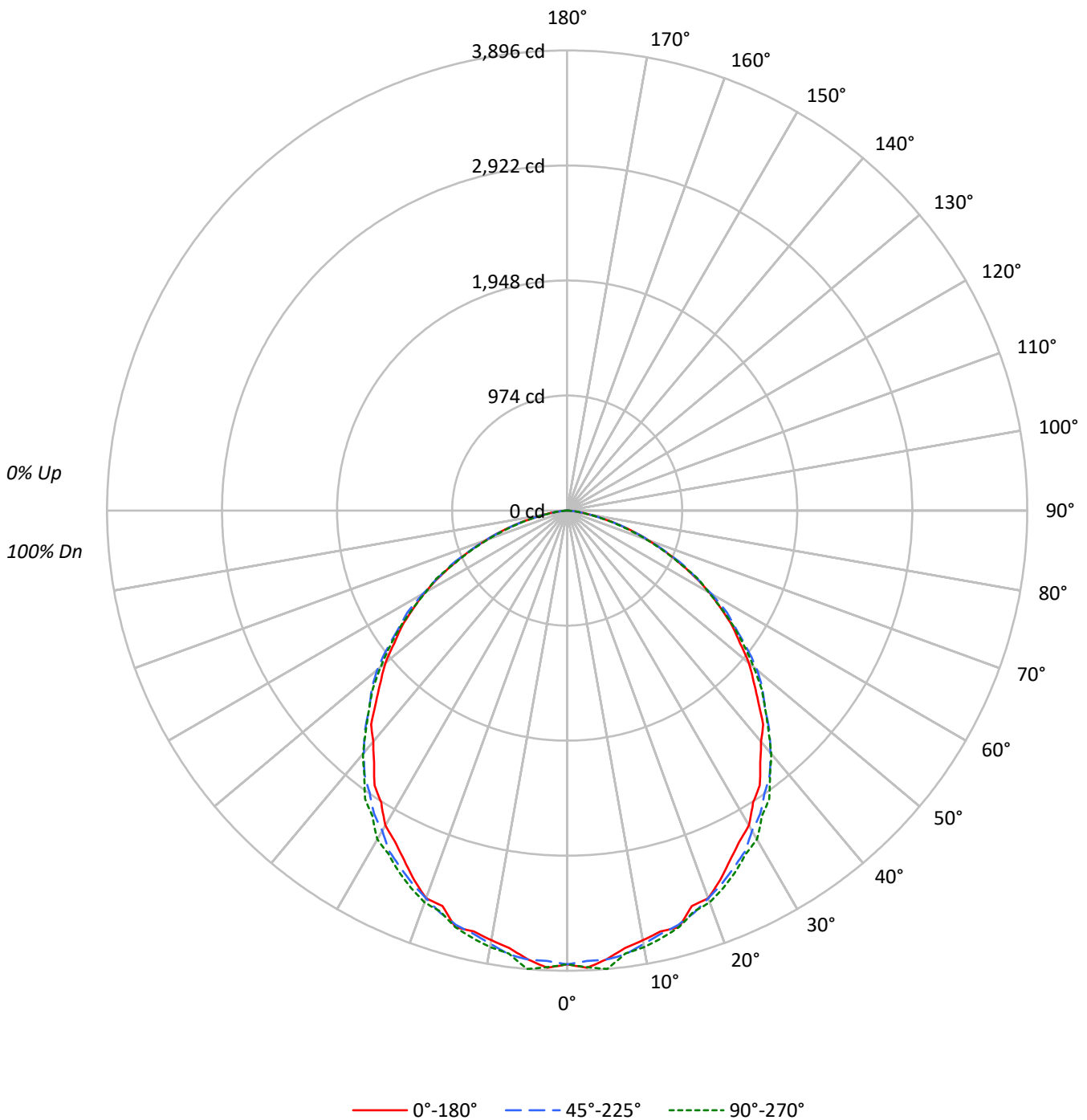
Lumens per Lamp: N/A
Luminaire Lumens: 9681.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	10337	10337	10337
5°	10302	10306	10523
10°	10094	10182	10253
15°	10173	10118	10175
20°	10001	10001	10108
25°	9694	9906	10015
30°	9561	9729	9988
35°	9336	9580	9795
40°	8972	9405	9446
45°	8701	9011	9024
50°	8415	8795	8627
55°	8018	8174	8116
60°	7498	7572	7436
65°	6685	6856	6638
70°	5736	5755	5596
75°	4543	4532	4357
80°	3044	2958	2844
85°	1655	1639	1531



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.3	3.7
10°-20°	1024.0	10.6
20°-30°	1534.2	15.8
30°-40°	1818.3	18.8
40°-50°	1821.7	18.8
50°-60°	1546.3	16.0
60°-70°	1042.5	10.8
70°-80°	458.1	4.7
80°-90°	74.4	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°	2919.6	30.2
0°-40°	4737.9	48.9
0°-60°	8105.9	83.7
0°-90°	9681.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9681.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3841	3841	3841	3841	3841	
5°	3814	3805	3815	3804	3896	360
15°	3652	3610	3632	3651	3652	1017
25°	3265	3283	3336	3380	3373	1509
35°	2842	2850	2916	2984	2982	1764
45°	2286	2329	2368	2429	2371	1769
55°	1709	1698	1742	1730	1730	1520
65°	1050	1036	1077	1036	1042	1044
75°	437	428	436	405	419	468
85°	54	52	53	52	50	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3841.2	3841.2	3841.2	3841.2	3841.2
2.5°	3874.4	3845.1	3817.9	3849.6	3868.9
5°	3813.9	3805.0	3815.4	3804.0	3895.7
7.5°	3735.5	3769.8	3789.6	3777.2	3782.7
10°	3693.9	3682.0	3726.1	3756.9	3752.4
12.5°	3649.2	3667.1	3669.6	3702.8	3705.8
15°	3651.7	3609.6	3631.9	3650.7	3652.2
17.5°	3509.9	3555.5	3570.9	3614.0	3560.5
20°	3492.5	3459.3	3492.5	3536.7	3529.7
22.5°	3385.9	3348.7	3420.1	3459.3	3456.8
25°	3264.9	3282.7	3336.3	3379.9	3373.0
27.5°	3158.7	3179.6	3255.9	3316.0	3277.3
30°	3076.9	3066.5	3131.0	3184.5	3214.3
32.5°	2930.6	2968.3	3043.7	3096.7	3068.5
35°	2841.8	2850.3	2916.2	2983.7	2981.7
37.5°	2686.6	2725.8	2818.5	2837.4	2820.0
40°	2554.2	2593.4	2677.2	2697.5	2689.1
42.5°	2456.5	2463.4	2535.3	2558.6	2521.4
45°	2286.4	2329.0	2367.7	2428.7	2371.2
47.5°	2141.5	2161.4	2244.7	2261.1	2230.8
50°	2010.1	2017.1	2100.9	2080.5	2060.7
52.5°	1845.0	1874.2	1921.3	1917.4	1894.1
55°	1709.1	1697.7	1742.3	1730.4	1729.9
57.5°	1545.9	1565.7	1602.4	1583.6	1553.3
60°	1393.1	1393.6	1407.0	1385.7	1381.7
62.5°	1223.0	1229.0	1232.0	1205.7	1248.3
65°	1049.9	1036.1	1076.7	1035.6	1042.5
67.5°	890.7	897.7	893.7	867.9	877.8
70°	729.1	738.0	731.5	702.3	711.2
72.5°	581.3	570.3	577.3	540.6	557.5
75°	436.9	428.0	435.9	405.2	419.1
77.5°	297.6	304.5	299.6	283.2	292.6
80°	196.4	190.9	190.9	181.5	183.5
82.5°	114.6	109.1	107.6	104.6	109.1
85°	53.6	52.1	53.1	51.6	49.6
87.5°	19.3	19.8	19.8	18.8	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)