

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: P589652

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-93-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589652
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-93-97-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

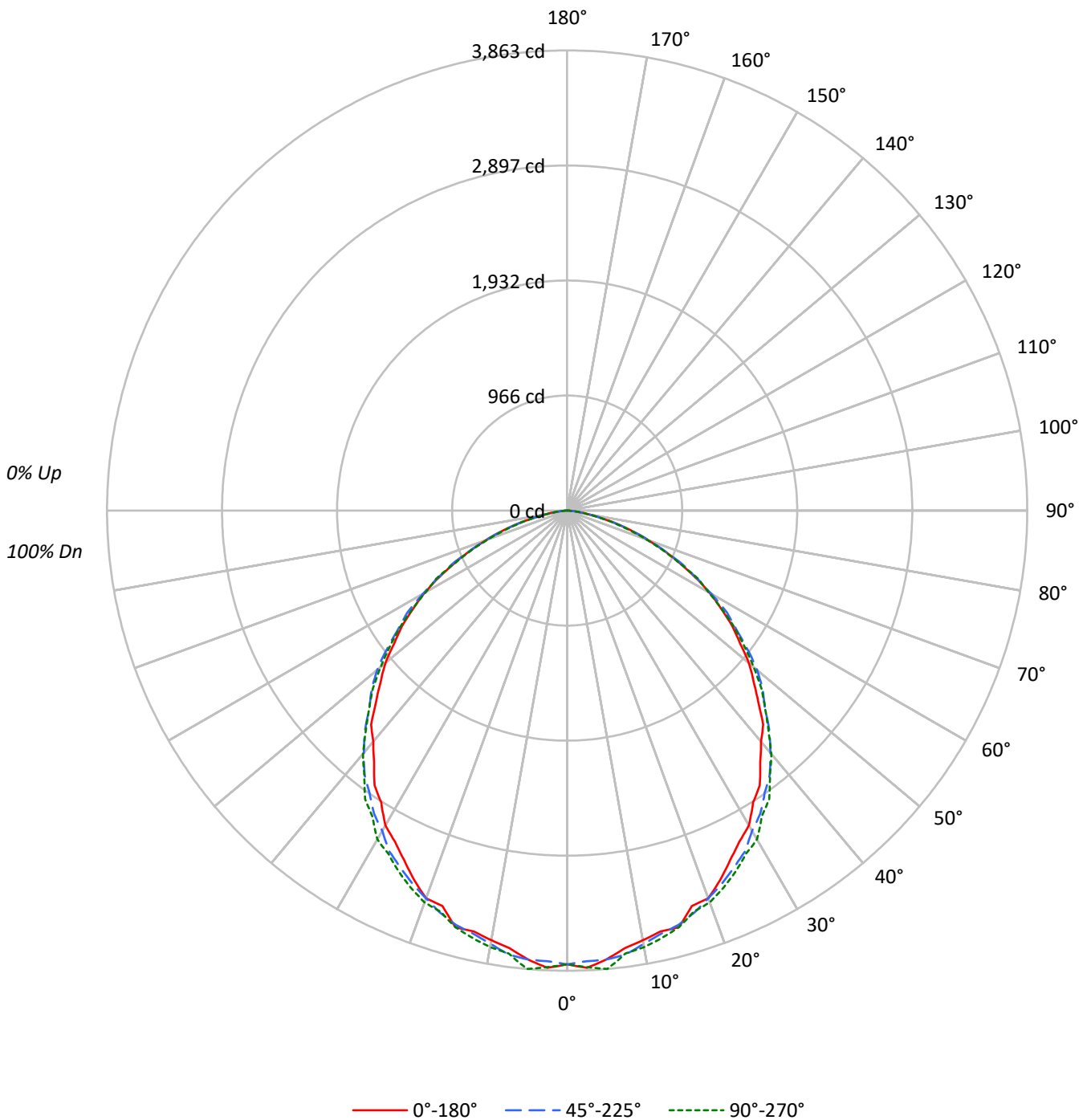
Lumens per Lamp: N/A
Luminaire Lumens: 9600.0 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (A_{in}): 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: P589652

CATALOG NUMBER: FMR-24-2-LD4-4HI-50-UNV-93-97-EDD

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°	10250	10250	10250
5°	10216	10220	10435
10°	10009	10096	10168
15°	10088	10033	10090
20°	9918	9918	10023
25°	9613	9823	9931
30°	9481	9647	9904
35°	9257	9500	9713
40°	8897	9326	9367
45°	8628	8935	8948
50°	8345	8722	8555
55°	7951	8106	8048
60°	7435	7509	7374
65°	6630	6798	6583
70°	5688	5707	5548
75°	4505	4495	4321
80°	3019	2934	2820
85°	1639	1624	1519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.3	3.7
10°-20°	1015.5	10.6
20°-30°	1521.4	15.8
30°-40°	1803.1	18.8
40°-50°	1806.5	18.8
50°-60°	1533.4	16.0
60°-70°	1033.8	10.8
70°-80°	454.3	4.7
80°-90°	73.8	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°	2895.1	30.2
0°-40°	4698.3	48.9
0°-60°	8038.1	83.7
0°-90°	9600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9600.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3809	3809	3809	3809	3809	
5°	3782	3773	3784	3772	3863	357
15°	3621	3579	3602	3620	3622	1009
25°	3238	3255	3308	3352	3345	1497
35°	2818	2826	2892	2959	2957	1750
45°	2267	2310	2348	2408	2351	1754
55°	1695	1684	1728	1716	1715	1508
65°	1041	1027	1068	1027	1034	1035
75°	433	424	432	402	416	464
85°	53	52	53	51	49	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3809.0	3809.0	3809.0	3809.0	3809.0
2.5°	3842.0	3813.0	3785.9	3817.4	3836.6
5°	3782.0	3773.1	3783.5	3772.2	3863.1
7.5°	3704.3	3738.2	3757.9	3745.6	3751.0
10°	3663.0	3651.2	3694.9	3725.4	3721.0
12.5°	3618.7	3636.4	3638.9	3671.8	3674.8
15°	3621.2	3579.4	3601.5	3620.2	3621.7
17.5°	3480.5	3525.8	3541.0	3583.8	3530.7
20°	3463.3	3430.3	3463.3	3507.1	3500.2
22.5°	3357.6	3320.7	3391.5	3430.3	3427.9
25°	3237.6	3255.3	3308.4	3351.7	3344.8
27.5°	3132.3	3153.0	3228.7	3288.2	3249.9
30°	3051.2	3040.8	3104.8	3157.9	3187.4
32.5°	2906.1	2943.5	3018.2	3070.8	3042.8
35°	2818.0	2826.4	2891.8	2958.7	2956.7
37.5°	2664.1	2703.0	2794.9	2813.6	2796.4
40°	2532.8	2571.7	2654.8	2674.9	2666.6
42.5°	2435.9	2442.8	2514.1	2537.2	2500.3
45°	2267.2	2309.5	2347.9	2408.4	2351.3
47.5°	2123.6	2143.3	2225.9	2242.1	2212.1
50°	1993.3	2000.2	2083.3	2063.1	2043.5
52.5°	1829.5	1858.5	1905.3	1901.3	1878.2
55°	1694.8	1683.5	1727.7	1715.9	1715.4
57.5°	1533.0	1552.6	1589.0	1570.3	1540.3
60°	1381.5	1382.0	1395.3	1374.1	1370.2
62.5°	1212.8	1218.7	1221.6	1195.6	1237.9
65°	1041.2	1027.4	1067.7	1026.9	1033.8
67.5°	883.3	890.2	886.2	860.7	870.5
70°	723.0	731.8	725.4	696.4	705.2
72.5°	576.4	565.6	572.5	536.1	552.8
75°	433.3	424.4	432.3	401.8	415.6
77.5°	295.1	302.0	297.1	280.8	290.2
80°	194.8	189.3	189.3	180.0	182.0
82.5°	113.6	108.2	106.7	103.8	108.2
85°	53.1	51.6	52.6	51.1	49.2
87.5°	19.2	19.7	19.7	18.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)