

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: P589646

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-93-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589646
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-93-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

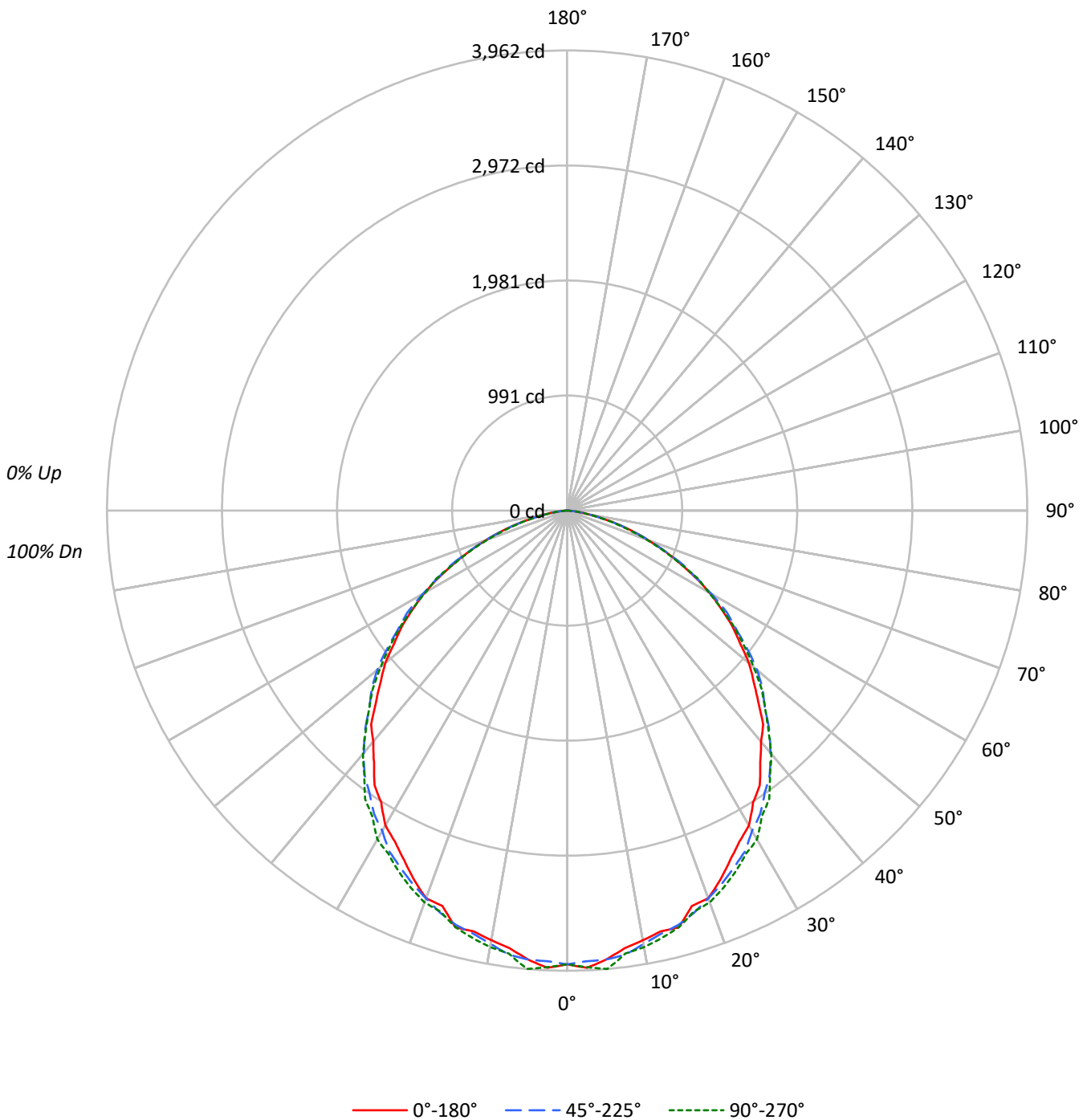
Lumens per Lamp: N/A
Luminaire Lumens: 9846.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	10513	10513	10513
5°	10478	10482	10703
10°	10265	10355	10428
15°	10347	10291	10348
20°	10172	10172	10280
25°	9859	10075	10186
30°	9724	9894	10158
35°	9495	9743	9962
40°	9125	9565	9607
45°	8849	9164	9178
50°	8559	8945	8774
55°	8155	8313	8254
60°	7626	7702	7563
65°	6799	6973	6751
70°	5834	5854	5691
75°	4620	4610	4431
80°	3095	3009	2892
85°	1683	1667	1556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.5	3.7
10°-20°	1041.5	10.6
20°-30°	1560.4	15.8
30°-40°	1849.3	18.8
40°-50°	1852.8	18.8
50°-60°	1572.7	16.0
60°-70°	1060.3	10.8
70°-80°	465.9	4.7
80°-90°	75.7	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°	2969.3	30.2
0°-40°	4818.6	48.9
0°-60°	8244.1	83.7
0°-90°	9846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9846.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3907	3907	3907	3907	3907	
5°	3879	3870	3880	3869	3962	366
15°	3714	3671	3694	3713	3714	1035
25°	3320	3339	3393	3438	3430	1535
35°	2890	2899	2966	3034	3032	1795
45°	2325	2369	2408	2470	2412	1799
55°	1738	1727	1772	1760	1759	1546
65°	1068	1054	1095	1053	1060	1062
75°	444	435	443	412	426	476
85°	54	53	54	52	50	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3906.6	3906.6	3906.6	3906.6	3906.6
2.5°	3940.4	3910.7	3882.9	3915.2	3934.9
5°	3878.9	3869.8	3880.4	3868.8	3962.1
7.5°	3799.2	3834.0	3854.2	3841.6	3847.1
10°	3756.8	3744.7	3789.6	3820.9	3816.4
12.5°	3711.4	3729.6	3732.1	3765.9	3768.9
15°	3714.0	3671.1	3693.8	3713.0	3714.5
17.5°	3569.7	3616.1	3631.7	3675.6	3621.1
20°	3552.0	3518.2	3552.0	3596.9	3589.9
22.5°	3443.6	3405.8	3478.4	3518.2	3515.7
25°	3320.5	3338.7	3393.2	3437.5	3430.5
27.5°	3212.6	3233.8	3311.4	3372.5	3333.1
30°	3129.4	3118.8	3184.3	3238.8	3269.1
32.5°	2980.6	3018.9	3095.6	3149.5	3120.8
35°	2890.3	2898.8	2965.9	3034.5	3032.5
37.5°	2732.4	2772.2	2866.6	2885.7	2868.1
40°	2597.7	2637.6	2722.8	2743.5	2734.9
42.5°	2498.3	2505.4	2578.5	2602.2	2564.4
45°	2325.3	2368.7	2408.0	2470.1	2411.6
47.5°	2178.0	2198.2	2283.0	2299.6	2268.8
50°	2044.4	2051.4	2136.7	2116.0	2095.8
52.5°	1876.4	1906.2	1954.1	1950.0	1926.3
55°	1738.2	1726.6	1772.0	1759.9	1759.4
57.5°	1572.2	1592.4	1629.7	1610.6	1579.8
60°	1416.9	1417.4	1431.0	1409.3	1405.3
62.5°	1243.9	1249.9	1253.0	1226.2	1269.6
65°	1067.8	1053.7	1095.1	1053.2	1060.3
67.5°	905.9	913.0	908.9	882.7	892.8
70°	741.5	750.6	744.0	714.2	723.3
72.5°	591.2	580.1	587.1	549.8	567.0
75°	444.4	435.3	443.4	412.1	426.2
77.5°	302.6	309.7	304.7	288.0	297.6
80°	199.7	194.2	194.2	184.6	186.6
82.5°	116.5	111.0	109.5	106.4	111.0
85°	54.5	53.0	54.0	52.5	50.4
87.5°	19.7	20.2	20.2	19.2	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)