

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: P589591

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-80-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589591
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-80-86-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

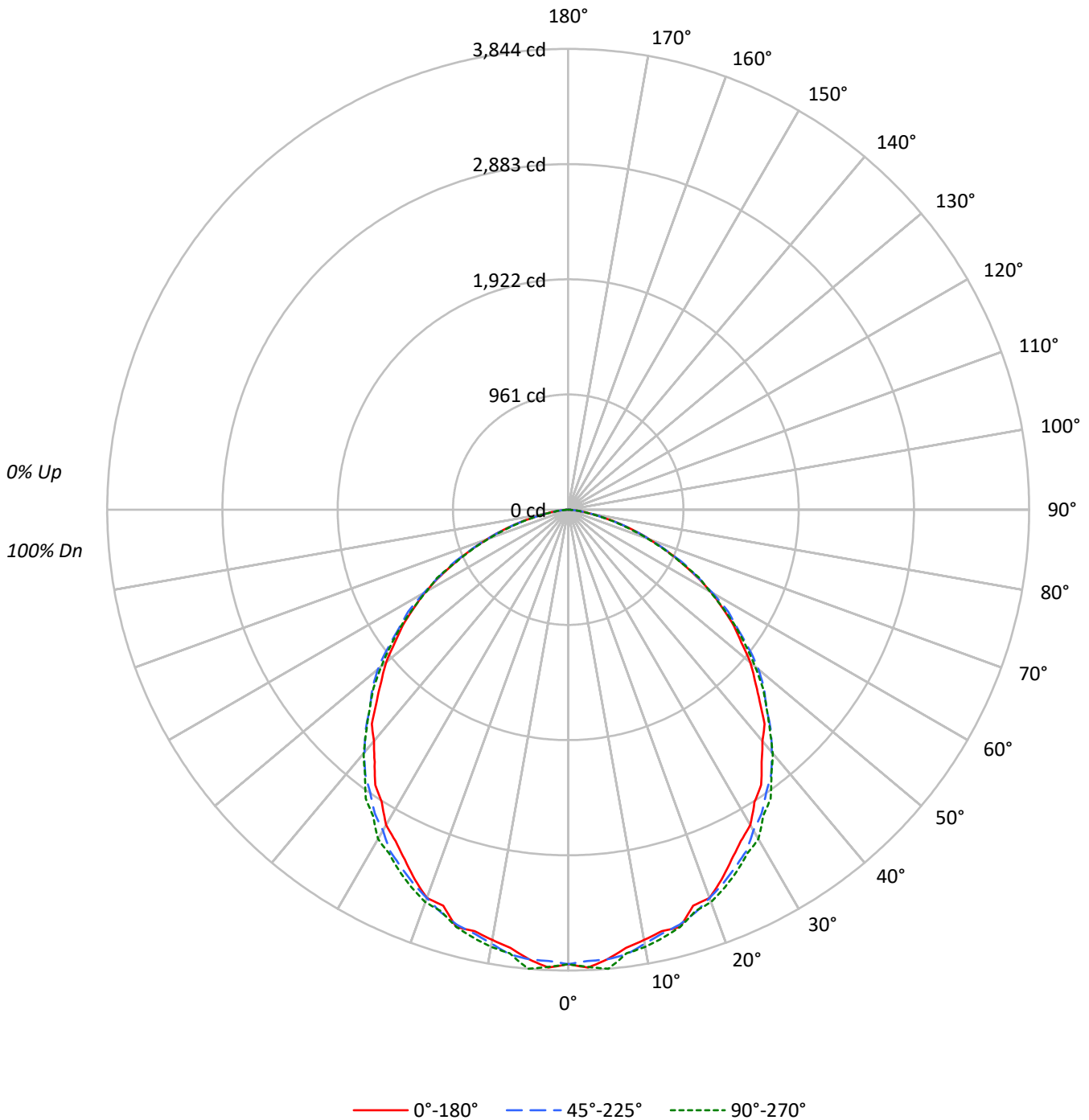
Lumens per Lamp: N/A
Luminaire Lumens: 9553.0 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	10200	10200	10200
5°	10166	10170	10384
10°	9960	10047	10118
15°	10039	9984	10040
20°	9869	9869	9974
25°	9566	9775	9883
30°	9434	9600	9856
35°	9212	9453	9666
40°	8854	9280	9321
45°	8586	8891	8904
50°	8304	8679	8513
55°	7912	8066	8009
60°	7399	7472	7338
65°	6597	6765	6550
70°	5660	5680	5522
75°	4483	4473	4299
80°	3003	2920	2806
85°	1633	1618	1510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.5	3.7
10°-20°	1010.5	10.6
20°-30°	1513.9	15.8
30°-40°	1794.3	18.8
40°-50°	1797.6	18.8
50°-60°	1525.9	16.0
60°-70°	1028.8	10.8
70°-80°	452.0	4.7
80°-90°	73.5	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°	2880.9	30.2
0°-40°	4675.2	48.9
0°-60°	7998.7	83.7
0°-90°	9553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9553.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3790	3790	3790	3790	3790	
5°	3764	3755	3765	3754	3844	355
15°	3603	3562	3584	3602	3604	1004
25°	3222	3239	3292	3335	3328	1489
35°	2804	2813	2878	2944	2942	1741
45°	2256	2298	2336	2397	2340	1745
55°	1686	1675	1719	1708	1707	1500
65°	1036	1022	1062	1022	1029	1030
75°	431	422	430	400	414	462
85°	53	51	52	51	49	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3790.4	3790.4	3790.4	3790.4	3790.4
2.5°	3823.2	3794.3	3767.4	3798.7	3817.8
5°	3763.5	3754.7	3764.9	3753.7	3844.2
7.5°	3686.1	3719.9	3739.5	3727.3	3732.6
10°	3645.0	3633.3	3676.8	3707.2	3702.8
12.5°	3601.0	3618.6	3621.1	3653.8	3656.8
15°	3603.4	3561.8	3583.9	3602.5	3603.9
17.5°	3463.5	3508.5	3523.7	3566.2	3513.4
20°	3446.3	3413.6	3446.3	3489.9	3483.0
22.5°	3341.1	3304.4	3374.9	3413.6	3411.1
25°	3221.7	3239.3	3292.2	3335.2	3328.4
27.5°	3117.0	3137.5	3212.9	3272.1	3233.9
30°	3036.2	3025.9	3089.6	3142.4	3171.8
32.5°	2891.9	2929.0	3003.4	3055.8	3027.9
35°	2804.3	2812.6	2877.7	2944.2	2942.3
37.5°	2651.1	2689.7	2781.3	2799.8	2782.7
40°	2520.4	2559.1	2641.8	2661.8	2653.5
42.5°	2424.0	2430.8	2501.8	2524.8	2488.1
45°	2256.1	2298.2	2336.4	2396.6	2339.8
47.5°	2113.2	2132.8	2215.0	2231.2	2201.3
50°	1983.5	1990.4	2073.1	2053.0	2033.4
52.5°	1820.6	1849.4	1895.9	1892.0	1869.0
55°	1686.5	1675.2	1719.3	1707.5	1707.0
57.5°	1525.5	1545.0	1581.2	1562.6	1532.8
60°	1374.7	1375.2	1388.4	1367.4	1363.5
62.5°	1206.9	1212.7	1215.7	1189.7	1231.8
65°	1036.1	1022.4	1062.5	1021.9	1028.7
67.5°	879.0	885.8	881.9	856.4	866.2
70°	719.4	728.2	721.9	693.0	701.8
72.5°	573.6	562.8	569.7	533.4	550.1
75°	431.2	422.4	430.2	399.8	413.5
77.5°	293.6	300.5	295.6	279.4	288.7
80°	193.8	188.4	188.4	179.1	181.1
82.5°	113.1	107.7	106.2	103.3	107.7
85°	52.9	51.4	52.4	50.9	48.9
87.5°	19.1	19.6	19.6	18.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)