

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561491

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561491
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-2HI-50-UNV-82-85-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7629.0 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

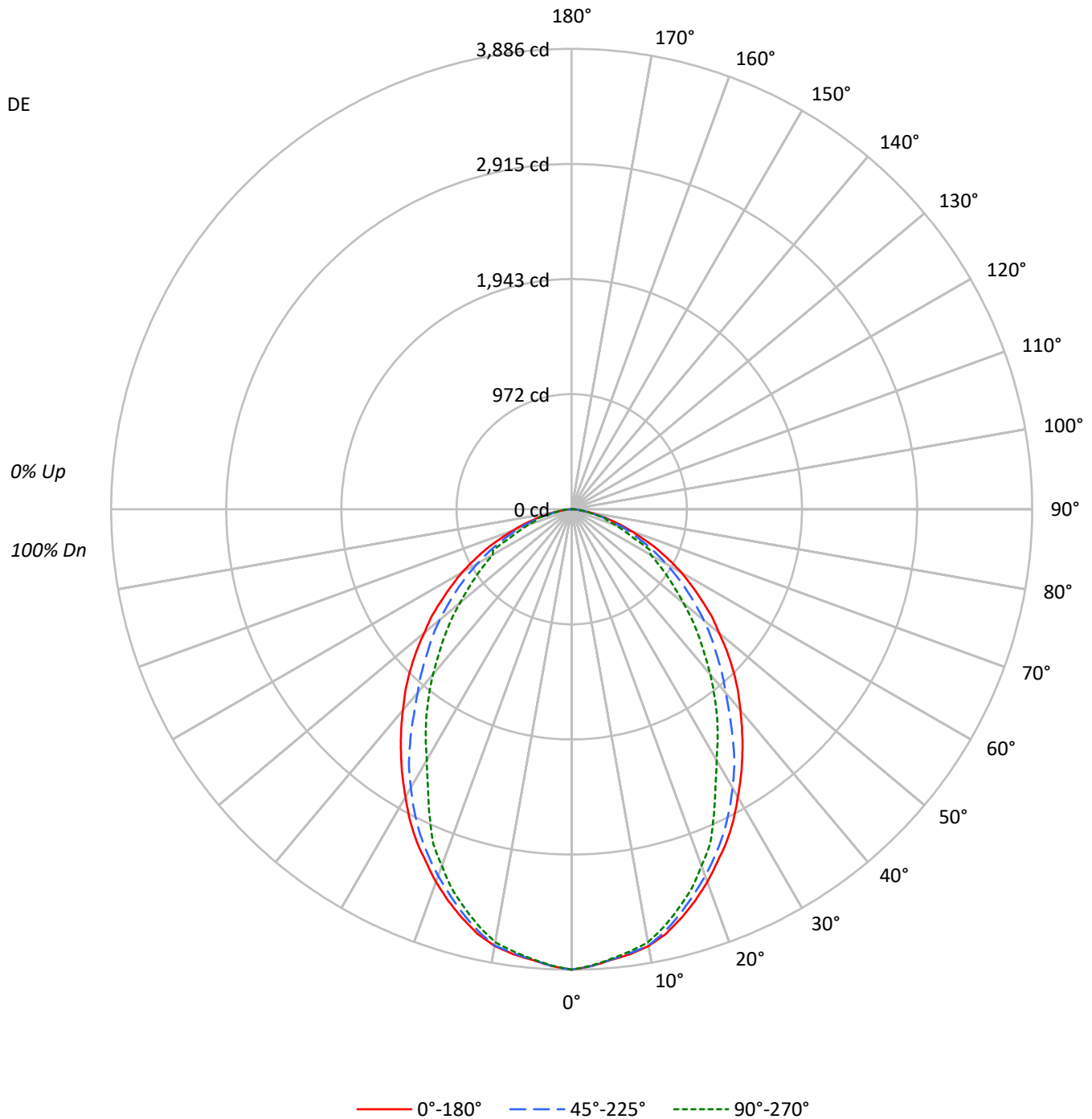
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10457	10457	10457
5°	10315	10303	10291
10°	10226	10214	10140
15°	9950	9850	9713
20°	9585	9430	9173
25°	9191	8991	8430
30°	8711	8432	7594
35°	8250	7793	7025
40°	7781	7102	6392
45°	7335	6565	5779
50°	6790	6094	5153
55°	6281	5522	4616
60°	5754	4933	4134
65°	5063	4320	3662
70°	4171	3782	3110
75°	3317	2896	3036
80°	2228	2089	1949
85°	1386	1664	1942

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7335 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.7	4.7
10°-20°	992.8	13.0
20°-30°	1374.4	18.0
30°-40°	1465.5	19.2
40°-50°	1337.0	17.5
50°-60°	1047.4	13.7
60°-70°	682.7	8.9
70°-80°	302.5	4.0
80°-90°	64.9	0.9
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°	2729.0	35.8
0°-40°	4194.5	55.0
0°-60°	6578.9	86.2
0°-90°	7629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3886	3886	3886	3886	3886	
5°	3819	3814	3814	3810	3810	362
15°	3572	3572	3536	3500	3486	1004
25°	3095	3077	3028	2920	2839	1421
35°	2511	2493	2372	2192	2138	1570
45°	1927	1887	1725	1581	1518	1485
55°	1339	1298	1177	1038	984	1201
65°	795	750	678	692	575	784
75°	319	296	278	265	292	342
85°	45	49	54	58	63	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3886.1	3886.1	3886.1	3886.1	3886.1
2.5°	3859.2	3859.2	3859.2	3854.7	3854.7
5°	3818.7	3814.2	3814.2	3809.7	3809.7
7.5°	3787.3	3782.8	3778.3	3773.8	3764.8
10°	3742.3	3742.3	3737.9	3715.4	3710.9
12.5°	3670.5	3666.0	3648.0	3616.6	3607.6
15°	3571.6	3571.6	3535.7	3499.7	3486.3
17.5°	3463.8	3459.3	3414.4	3378.4	3360.5
20°	3347.0	3338.0	3293.1	3234.7	3203.2
22.5°	3216.7	3216.7	3162.8	3086.4	3055.0
25°	3095.4	3077.4	3028.0	2920.2	2839.3
27.5°	2956.1	2929.2	2875.3	2722.5	2628.2
30°	2803.4	2789.9	2713.5	2515.9	2444.0
32.5°	2659.6	2637.2	2556.3	2349.6	2291.2
35°	2511.4	2493.4	2372.1	2192.4	2138.5
37.5°	2363.1	2340.7	2187.9	2044.1	1976.7
40°	2214.9	2187.9	2021.7	1891.4	1819.5
42.5°	2075.6	2039.6	1877.9	1738.6	1657.8
45°	1927.3	1886.9	1725.2	1581.4	1518.5
47.5°	1779.1	1743.1	1594.9	1446.6	1374.7
50°	1621.8	1590.4	1455.6	1307.4	1231.0
52.5°	1491.5	1442.1	1311.8	1163.6	1100.7
55°	1338.8	1298.4	1177.1	1037.8	983.9
57.5°	1199.5	1159.1	1046.8	916.5	871.6
60°	1069.2	1010.8	916.5	804.2	768.2
62.5°	925.5	880.6	799.7	705.3	750.3
65°	795.2	750.3	678.4	691.9	575.1
67.5°	651.4	629.0	566.1	503.2	485.2
70°	530.1	503.2	480.7	413.3	395.3
72.5°	422.3	395.3	363.9	328.0	314.5
75°	319.0	296.5	278.5	265.1	292.0
77.5°	220.1	211.2	197.7	184.2	179.7
80°	143.8	139.3	134.8	130.3	125.8
82.5°	85.4	85.4	85.4	85.4	85.4
85°	44.9	49.4	53.9	58.4	62.9
87.5°	27.0	27.0	31.4	35.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)