

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: P562514

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562514
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-24-4-LD4-2HI-35-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7301.9 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

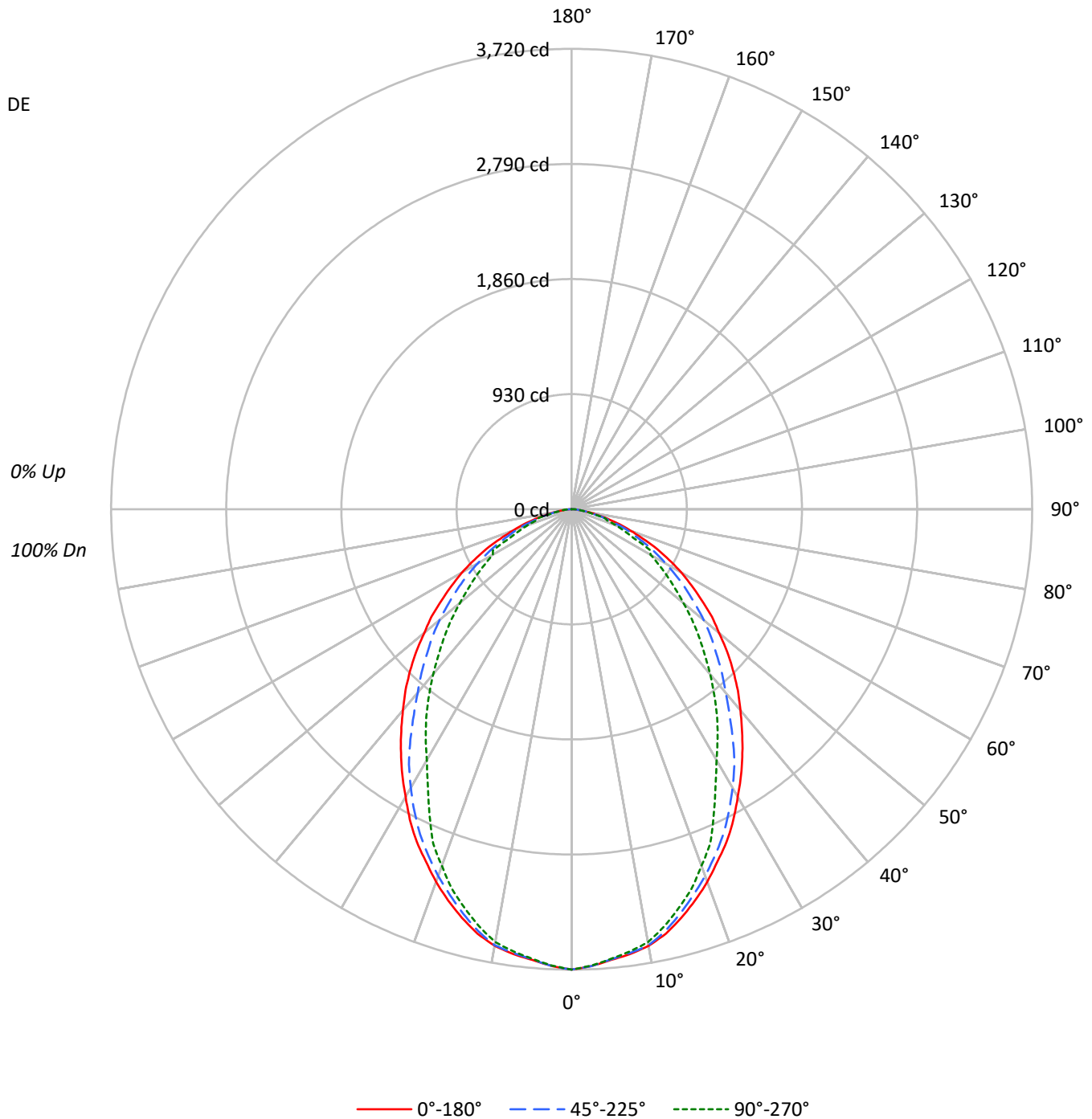
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5005	5005	5005
5°	4937	4931	4925
10°	4894	4888	4853
15°	4762	4714	4648
20°	4587	4513	4390
25°	4398	4303	4035
30°	4169	4035	3634
35°	3948	3729	3362
40°	3723	3399	3059
45°	3510	3142	2766
50°	3249	2916	2466
55°	3006	2643	2209
60°	2754	2361	1979
65°	2423	2067	1752
70°	1996	1810	1489
75°	1587	1386	1453
80°	1066	1000	933
85°	664	797	929

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3510 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.2	4.7
10°-20°	950.2	13.0
20°-30°	1315.5	18.0
30°-40°	1402.7	19.2
40°-50°	1279.7	17.5
50°-60°	1002.5	13.7
60°-70°	653.4	8.9
70°-80°	289.5	4.0
80°-90°	62.2	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°	2612.0	35.8
0°-40°	4014.7	55.0
0°-60°	6296.9	86.2
0°-90°	7301.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7301.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3720	3720	3720	3720	3720	
5°	3655	3651	3651	3646	3646	347
15°	3418	3418	3384	3350	3337	961
25°	2963	2946	2898	2795	2718	1360
35°	2404	2386	2270	2098	2047	1503
45°	1845	1806	1651	1514	1453	1421
55°	1281	1243	1127	993	942	1149
65°	761	718	649	662	550	750
75°	305	284	267	254	280	327
85°	43	47	52	56	60	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3719.5	3719.5	3719.5	3719.5	3719.5
2.5°	3693.7	3693.7	3693.7	3689.4	3689.4
5°	3655.0	3650.7	3650.7	3646.4	3646.4
7.5°	3624.9	3620.6	3616.3	3612.0	3603.4
10°	3581.9	3581.9	3577.6	3556.1	3551.8
12.5°	3513.1	3508.8	3491.6	3461.5	3452.9
15°	3418.5	3418.5	3384.1	3349.7	3336.8
17.5°	3315.3	3311.0	3268.0	3233.6	3216.4
20°	3203.5	3194.9	3151.9	3096.0	3065.9
22.5°	3078.8	3078.8	3027.2	2954.1	2924.0
25°	2962.7	2945.5	2898.2	2795.0	2717.6
27.5°	2829.4	2803.6	2752.0	2605.8	2515.5
30°	2683.2	2670.3	2597.2	2408.0	2339.2
32.5°	2545.6	2524.1	2446.7	2248.9	2193.0
35°	2403.7	2386.5	2270.4	2098.4	2046.8
37.5°	2261.8	2240.3	2094.1	1956.5	1892.0
40°	2119.9	2094.1	1935.0	1810.3	1741.5
42.5°	1986.6	1952.2	1797.4	1664.1	1586.7
45°	1844.7	1806.0	1651.2	1513.6	1453.4
47.5°	1702.8	1668.4	1526.5	1384.6	1315.8
50°	1552.3	1522.2	1393.2	1251.3	1178.2
52.5°	1427.6	1380.3	1255.6	1113.7	1053.5
55°	1281.4	1242.7	1126.6	993.3	941.7
57.5°	1148.1	1109.4	1001.9	877.2	834.2
60°	1023.4	967.5	877.2	769.7	735.3
62.5°	885.8	842.8	765.4	675.1	718.1
65°	761.1	718.1	649.3	662.2	550.4
67.5°	623.5	602.0	541.8	481.6	464.4
70°	507.4	481.6	460.1	395.6	378.4
72.5°	404.2	378.4	348.3	313.9	301.0
75°	305.3	283.8	266.6	253.7	279.5
77.5°	210.7	202.1	189.2	176.3	172.0
80°	137.6	133.3	129.0	124.7	120.4
82.5°	81.7	81.7	81.7	81.7	81.7
85°	43.0	47.3	51.6	55.9	60.2
87.5°	25.8	25.8	30.1	34.4	38.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)