

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: P563843

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563843
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-LD4-4LO-35-UNV-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10854.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

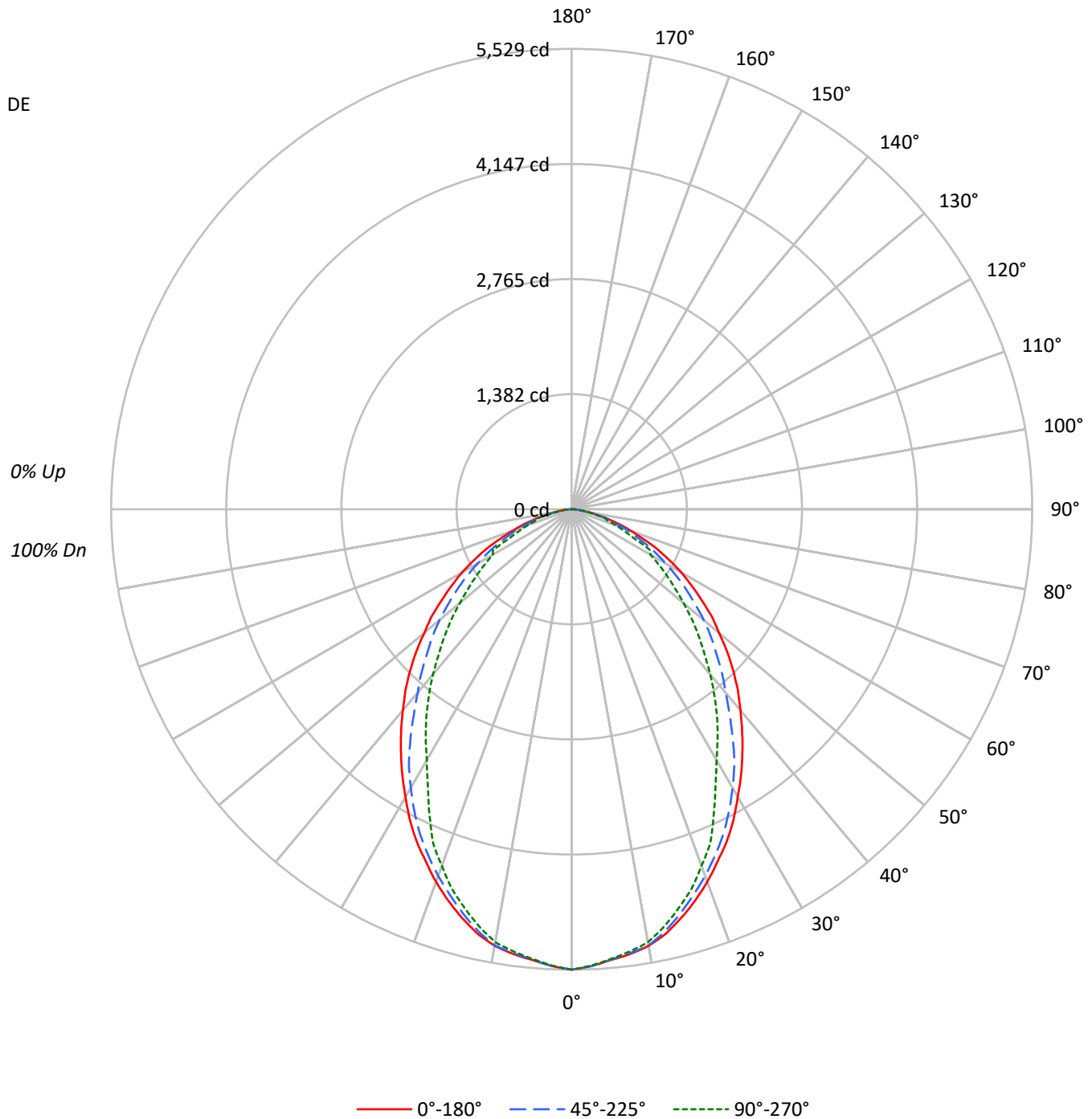
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7439	7439	7439
5°	7338	7329	7321
10°	7274	7266	7213
15°	7078	7007	6909
20°	6818	6708	6525
25°	6538	6396	5997
30°	6197	5998	5402
35°	5869	5543	4997
40°	5535	5052	4547
45°	5218	4670	4111
50°	4830	4335	3666
55°	4468	3928	3284
60°	4094	3509	2941
65°	3602	3073	2605
70°	2967	2690	2213
75°	2359	2060	2160
80°	1585	1486	1387
85°	986	1184	1382

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.7	4.7
10°-20°	1412.5	13.0
20°-30°	1955.4	18.0
30°-40°	2085.1	19.2
40°-50°	1902.2	17.5
50°-60°	1490.2	13.7
60°-70°	971.2	8.9
70°-80°	430.3	4.0
80°-90°	92.4	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°	3882.6	35.8
0°-40°	5967.6	55.0
0°-60°	9360.1	86.2
0°-90°	10854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10854.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5529	5529	5529	5529	5529	
5°	5433	5427	5427	5420	5420	516
15°	5082	5082	5030	4979	4960	1429
25°	4404	4378	4308	4155	4040	2022
35°	3573	3547	3375	3119	3042	2234
45°	2742	2684	2454	2250	2160	2112
55°	1905	1847	1675	1476	1400	1708
65°	1131	1067	965	984	818	1115
75°	454	422	396	377	416	486
85°	64	70	77	83	90	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5528.9	5528.9	5528.9	5528.9	5528.9
2.5°	5490.5	5490.5	5490.5	5484.1	5484.1
5°	5433.0	5426.6	5426.6	5420.2	5420.2
7.5°	5388.3	5381.9	5375.5	5369.1	5356.3
10°	5324.3	5324.3	5318.0	5286.0	5279.6
12.5°	5222.1	5215.7	5190.1	5145.4	5132.6
15°	5081.5	5081.5	5030.3	4979.2	4960.0
17.5°	4928.1	4921.7	4857.7	4806.6	4781.0
20°	4761.9	4749.1	4685.2	4602.1	4557.3
22.5°	4576.5	4576.5	4499.8	4391.1	4346.4
25°	4403.9	4378.4	4308.1	4154.7	4039.6
27.5°	4205.8	4167.4	4090.7	3873.4	3739.2
30°	3988.5	3969.3	3860.6	3579.4	3477.1
32.5°	3783.9	3752.0	3636.9	3342.9	3259.8
35°	3573.0	3547.4	3374.9	3119.2	3042.5
37.5°	3362.1	3330.1	3112.8	2908.3	2812.4
40°	3151.1	3112.8	2876.3	2690.9	2588.7
42.5°	2953.0	2901.9	2671.8	2473.6	2358.6
45°	2742.1	2684.5	2454.4	2249.9	2160.4
47.5°	2531.1	2480.0	2269.1	2058.2	1955.9
50°	2307.4	2262.7	2070.9	1860.0	1751.3
52.5°	2122.1	2051.8	1866.4	1655.5	1566.0
55°	1904.7	1847.2	1674.6	1476.5	1399.8
57.5°	1706.6	1649.1	1489.3	1303.9	1240.0
60°	1521.2	1438.1	1303.9	1144.1	1093.0
62.5°	1316.7	1252.8	1137.7	1003.5	1067.4
65°	1131.3	1067.4	965.2	984.3	818.1
67.5°	926.8	894.8	805.4	715.9	690.3
70°	754.2	715.9	683.9	588.0	562.5
72.5°	600.8	562.5	517.7	466.6	447.4
75°	453.8	421.9	396.3	377.1	415.5
77.5°	313.2	300.4	281.2	262.1	255.7
80°	204.5	198.1	191.8	185.4	179.0
82.5°	121.4	121.4	121.4	121.4	121.4
85°	63.9	70.3	76.7	83.1	89.5
87.5°	38.4	38.4	44.7	51.1	57.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)