

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: P563195

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563195
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-LD4-3HI-50-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14783.0 lumens
Efficiency: N/A
Efficacy: 114.1 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

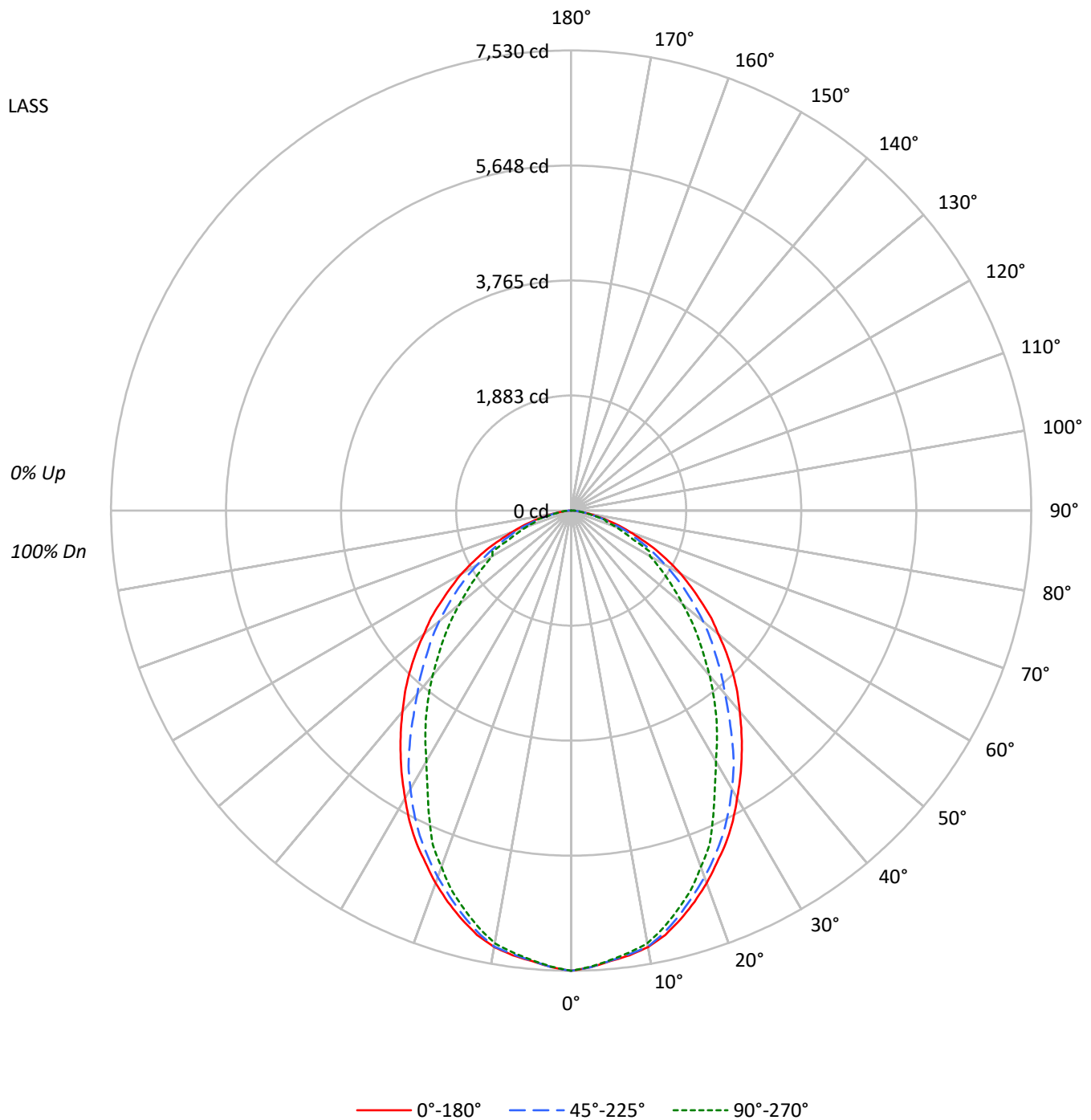
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10132	10132	10132
5°	9994	9982	9971
10°	9908	9896	9824
15°	9640	9543	9410
20°	9286	9137	8887
25°	8905	8711	8168
30°	8440	8169	7358
35°	7993	7550	6806
40°	7538	6881	6193
45°	7106	6361	5599
50°	6578	5904	4993
55°	6085	5350	4472
60°	5575	4779	4006
65°	4906	4185	3548
70°	4041	3664	3014
75°	3213	2806	2942
80°	2159	2024	1889
85°	1345	1613	1882

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7106 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	701.0	4.7
10°-20°	1923.7	13.0
20°-30°	2663.3	18.0
30°-40°	2839.8	19.2
40°-50°	2590.8	17.5
50°-60°	2029.7	13.7
60°-70°	1322.8	8.9
70°-80°	586.1	4.0
80°-90°	125.8	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°	5288.0	35.8
0°-40°	8127.8	55.0
0°-60°	12748.3	86.2
0°-90°	14783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14783.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7530	7530	7530	7530	7530	
5°	7400	7391	7391	7382	7382	702
15°	6921	6921	6851	6782	6756	1946
25°	5998	5963	5868	5659	5502	2754
35°	4866	4832	4596	4248	4144	3042
45°	3735	3656	3343	3064	2942	2877
55°	2594	2516	2281	2011	1906	2327
65°	1541	1454	1314	1341	1114	1519
75°	618	575	540	514	566	662
85°	87	96	104	113	122	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7530.3	7530.3	7530.3	7530.3	7530.3
2.5°	7478.0	7478.0	7478.0	7469.3	7469.3
5°	7399.7	7391.0	7391.0	7382.3	7382.3
7.5°	7338.7	7330.0	7321.3	7312.6	7295.2
10°	7251.7	7251.7	7243.0	7199.5	7190.7
12.5°	7112.4	7103.7	7068.9	7007.9	6990.5
15°	6920.9	6920.9	6851.2	6781.6	6755.5
17.5°	6711.9	6703.2	6616.2	6546.5	6511.7
20°	6485.6	6468.2	6381.1	6268.0	6207.0
22.5°	6233.1	6233.1	6128.7	5980.7	5919.7
25°	5998.1	5963.3	5867.5	5658.6	5501.9
27.5°	5728.2	5676.0	5571.5	5275.5	5092.7
30°	5432.2	5406.1	5258.1	4875.1	4735.8
32.5°	5153.7	5110.1	4953.4	4553.0	4439.8
35°	4866.4	4831.6	4596.5	4248.3	4143.8
37.5°	4579.1	4535.6	4239.6	3961.0	3830.4
40°	4291.8	4239.6	3917.5	3665.0	3525.7
42.5°	4021.9	3952.3	3638.9	3369.0	3212.3
45°	3734.7	3656.3	3342.9	3064.3	2942.5
47.5°	3447.4	3377.7	3090.5	2803.2	2663.9
50°	3142.7	3081.7	2820.6	2533.3	2385.3
52.5°	2890.2	2794.5	2542.0	2254.7	2132.8
55°	2594.2	2515.9	2280.8	2011.0	1906.5
57.5°	2324.4	2246.0	2028.4	1775.9	1688.9
60°	2071.9	1958.7	1775.9	1558.3	1488.6
62.5°	1793.3	1706.3	1549.6	1366.8	1453.8
65°	1540.9	1453.8	1314.5	1340.6	1114.3
67.5°	1262.3	1218.8	1096.9	975.0	940.2
70°	1027.2	975.0	931.5	800.9	766.1
72.5°	818.3	766.1	705.1	635.5	609.4
75°	618.1	574.6	539.7	513.6	565.9
77.5°	426.6	409.2	383.0	356.9	348.2
80°	278.6	269.9	261.2	252.5	243.8
82.5°	165.4	165.4	165.4	165.4	165.4
85°	87.1	95.8	104.5	113.2	121.9
87.5°	52.2	52.2	60.9	69.6	78.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)