

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: P563519

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563519
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-LD4-3STD-40-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11300.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

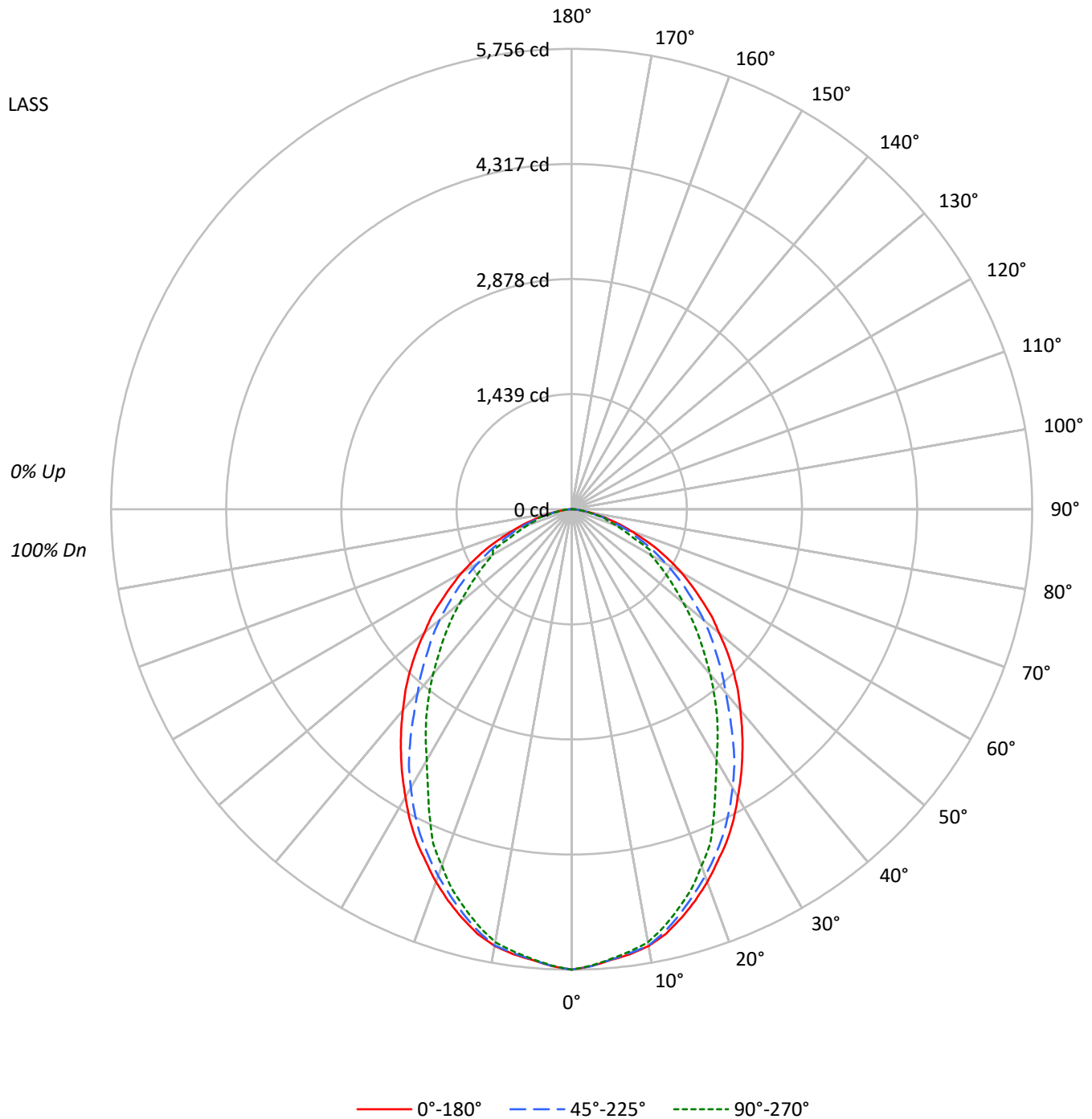
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	7745	7745	7745
5°	7640	7631	7621
10°	7573	7564	7510
15°	7369	7295	7193
20°	7098	6984	6794
25°	6807	6659	6244
30°	6451	6245	5624
35°	6110	5771	5203
40°	5762	5260	4734
45°	5432	4862	4280
50°	5028	4513	3817
55°	4652	4090	3419
60°	4262	3653	3062
65°	3750	3199	2712
70°	3089	2801	2304
75°	2456	2145	2248
80°	1650	1547	1444
85°	1027	1233	1439

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5432 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	535.8	4.7
10°-20°	1470.5	13.0
20°-30°	2035.8	18.0
30°-40°	2170.8	19.2
40°-50°	1980.4	17.5
50°-60°	1551.5	13.7
60°-70°	1011.2	8.9
70°-80°	448.0	4.0
80°-90°	96.2	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°	4042.1	35.8
0°-40°	6212.9	55.0
0°-60°	9744.7	86.2
0°-90°	11300.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11300.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5756	5756	5756	5756	5756	
5°	5656	5650	5650	5643	5643	537
15°	5290	5290	5237	5184	5164	1487
25°	4585	4558	4485	4325	4206	2105
35°	3720	3693	3514	3247	3168	2326
45°	2855	2795	2555	2342	2249	2199
55°	1983	1923	1744	1537	1457	1779
65°	1178	1111	1005	1025	852	1161
75°	472	439	413	393	432	506
85°	66	73	80	86	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5756.1	5756.1	5756.1	5756.1	5756.1
2.5°	5716.1	5716.1	5716.1	5709.5	5709.5
5°	5656.3	5649.6	5649.6	5642.9	5642.9
7.5°	5609.7	5603.0	5596.4	5589.7	5576.4
10°	5543.1	5543.1	5536.5	5503.2	5496.5
12.5°	5436.7	5430.0	5403.4	5356.8	5343.5
15°	5290.3	5290.3	5237.0	5183.8	5163.8
17.5°	5130.6	5123.9	5057.4	5004.1	4977.5
20°	4957.5	4944.2	4877.7	4791.2	4744.6
22.5°	4764.6	4764.6	4684.7	4571.6	4525.0
25°	4584.9	4558.3	4485.1	4325.4	4205.6
27.5°	4378.6	4338.7	4258.8	4032.6	3892.8
30°	4152.4	4132.4	4019.3	3726.5	3620.0
32.5°	3939.4	3906.1	3786.4	3480.3	3393.8
35°	3719.8	3693.2	3513.5	3247.4	3167.5
37.5°	3500.2	3467.0	3240.7	3027.8	2927.9
40°	3280.6	3240.7	2994.5	2801.5	2695.0
42.5°	3074.3	3021.1	2781.5	2575.3	2455.5
45°	2854.7	2794.9	2555.3	2342.4	2249.2
47.5°	2635.1	2581.9	2362.3	2142.7	2036.3
50°	2402.2	2355.7	2156.0	1936.4	1823.3
52.5°	2209.3	2136.1	1943.1	1723.5	1630.3
55°	1983.0	1923.1	1743.5	1537.2	1457.3
57.5°	1776.7	1716.8	1550.5	1357.5	1291.0
60°	1583.8	1497.2	1357.5	1191.1	1137.9
62.5°	1370.8	1304.3	1184.5	1044.7	1111.3
65°	1177.8	1111.3	1004.8	1024.8	851.8
67.5°	964.9	931.6	838.5	745.3	718.7
70°	785.2	745.3	712.0	612.2	585.6
72.5°	625.5	585.6	539.0	485.8	465.8
75°	472.5	439.2	412.6	392.6	432.5
77.5°	326.1	312.8	292.8	272.8	266.2
80°	212.9	206.3	199.6	193.0	186.3
82.5°	126.4	126.4	126.4	126.4	126.4
85°	66.5	73.2	79.9	86.5	93.2
87.5°	39.9	39.9	46.6	53.2	59.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)