

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: P563939

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563939
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-40-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11562.0 lumens
Efficiency: N/A
Efficacy: 123.5 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

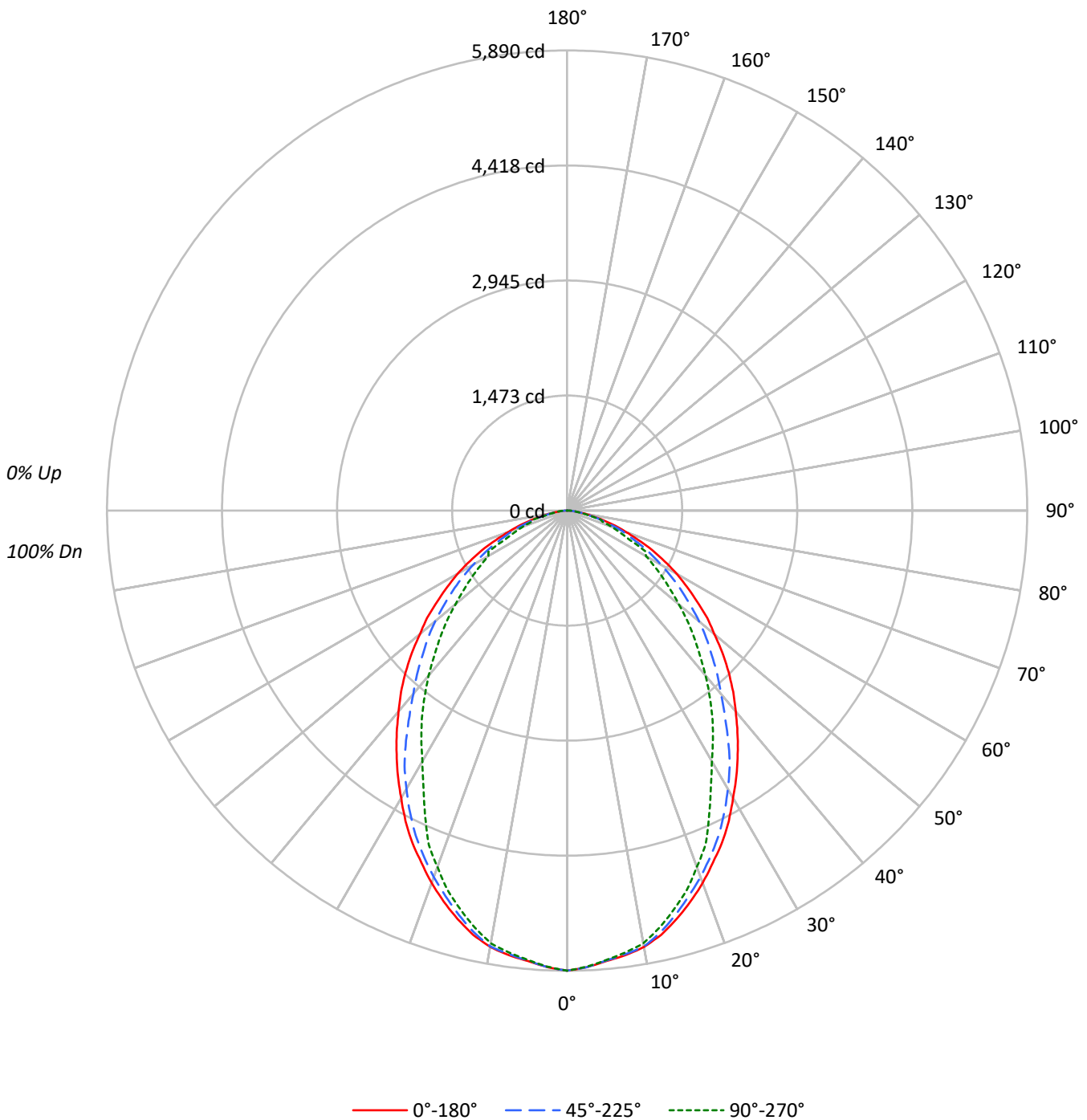
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7924	7924	7924
5°	7817	7807	7798
10°	7749	7740	7684
15°	7540	7464	7360
20°	7263	7146	6951
25°	6964	6813	6388
30°	6601	6389	5755
35°	6252	5905	5323
40°	5896	5381	4843
45°	5558	4975	4379
50°	5145	4618	3905
55°	4760	4185	3498
60°	4361	3738	3133
65°	3837	3273	2775
70°	3161	2866	2357
75°	2513	2194	2301
80°	1688	1583	1477
85°	1051	1261	1471

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5558 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	548.2	4.7
10°-20°	1504.6	13.0
20°-30°	2083.0	18.0
30°-40°	2221.1	19.2
40°-50°	2026.3	17.5
50°-60°	1587.4	13.7
60°-70°	1034.6	8.9
70°-80°	458.4	4.0
80°-90°	98.4	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°	4135.8	35.8
0°-40°	6356.9	55.0
0°-60°	9970.6	86.2
0°-90°	11562.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11562.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5890	5890	5890	5890	5890	
5°	5787	5781	5781	5774	5774	549
15°	5413	5413	5358	5304	5284	1522
25°	4691	4664	4589	4426	4303	2154
35°	3806	3779	3595	3323	3241	2379
45°	2921	2860	2614	2397	2301	2250
55°	2029	1968	1784	1573	1491	1820
65°	1205	1137	1028	1048	872	1188
75°	483	449	422	402	443	518
85°	68	75	82	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5889.5	5889.5	5889.5	5889.5	5889.5
2.5°	5848.7	5848.7	5848.7	5841.9	5841.9
5°	5787.4	5780.6	5780.6	5773.8	5773.8
7.5°	5739.7	5732.9	5726.1	5719.3	5705.7
10°	5671.6	5671.6	5664.8	5630.8	5624.0
12.5°	5562.7	5555.9	5528.7	5481.0	5467.4
15°	5412.9	5412.9	5358.4	5304.0	5283.6
17.5°	5249.5	5242.7	5174.6	5120.1	5092.9
20°	5072.5	5058.9	4990.8	4902.3	4854.6
22.5°	4875.0	4875.0	4793.3	4677.6	4629.9
25°	4691.2	4664.0	4589.1	4425.7	4303.1
27.5°	4480.1	4439.3	4357.6	4126.1	3983.1
30°	4248.6	4228.2	4112.5	3812.9	3703.9
32.5°	4030.8	3996.7	3874.2	3561.0	3472.4
35°	3806.1	3778.8	3595.0	3322.6	3240.9
37.5°	3581.4	3547.3	3315.8	3098.0	2995.8
40°	3356.7	3315.8	3063.9	2866.5	2757.5
42.5°	3145.6	3091.2	2846.0	2635.0	2512.4
45°	2920.9	2859.7	2614.5	2396.7	2301.3
47.5°	2696.2	2641.8	2417.1	2192.4	2083.5
50°	2457.9	2410.3	2206.0	1981.3	1865.6
52.5°	2260.5	2185.6	1988.1	1763.5	1668.1
55°	2029.0	1967.7	1783.9	1572.8	1491.1
57.5°	1817.9	1756.6	1586.4	1389.0	1320.9
60°	1620.5	1532.0	1389.0	1218.8	1164.3
62.5°	1402.6	1334.5	1211.9	1069.0	1137.1
65°	1205.1	1137.1	1028.1	1048.5	871.5
67.5°	987.3	953.2	857.9	762.6	735.3
70°	803.4	762.6	728.5	626.4	599.2
72.5°	640.0	599.2	551.5	497.0	476.6
75°	483.4	449.4	422.1	401.7	442.6
77.5°	333.6	320.0	299.6	279.2	272.3
80°	217.9	211.1	204.3	197.5	190.6
82.5°	129.4	129.4	129.4	129.4	129.4
85°	68.1	74.9	81.7	88.5	95.3
87.5°	40.9	40.9	47.7	54.5	61.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)