

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: P563135

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563135
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-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: 13860.0 lumens
Efficiency: N/A
Efficacy: 106.9 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

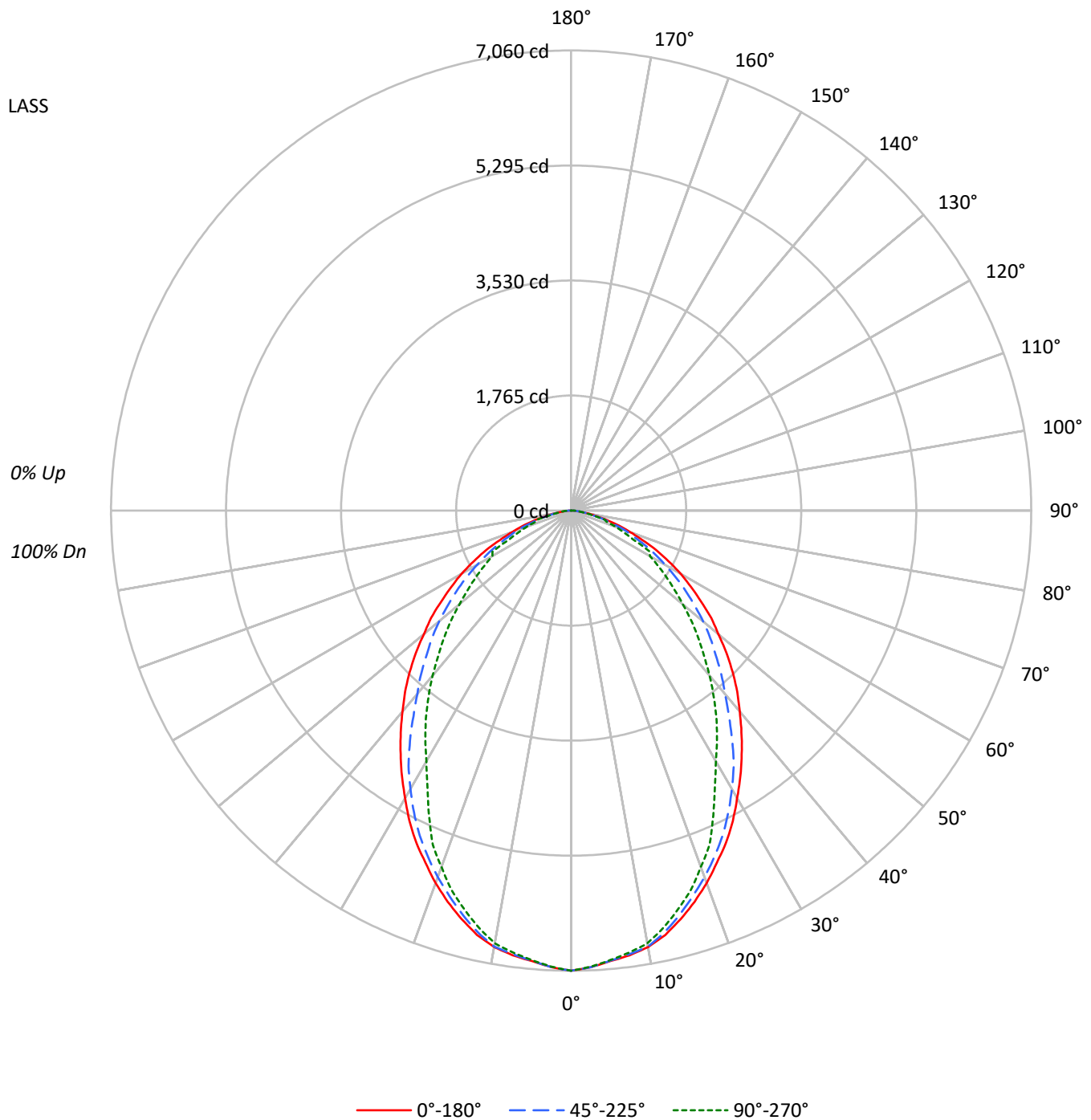
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9499	9499	9499
5°	9370	9359	9348
10°	9289	9278	9211
15°	9039	8948	8823
20°	8707	8566	8333
25°	8349	8167	7658
30°	7913	7659	6898
35°	7494	7079	6381
40°	7067	6451	5806
45°	6663	5964	5249
50°	6168	5535	4681
55°	5706	5016	4193
60°	5227	4480	3756
65°	4599	3924	3326
70°	3789	3436	2826
75°	3013	2630	2758
80°	2024	1898	1771
85°	1260	1511	1765

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6663 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	657.2	4.7
10°-20°	1803.6	13.0
20°-30°	2497.0	18.0
30°-40°	2662.5	19.2
40°-50°	2429.0	17.5
50°-60°	1902.9	13.7
60°-70°	1240.2	8.9
70°-80°	549.5	4.0
80°-90°	118.0	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°	4957.8	35.8
0°-40°	7620.4	55.0
0°-60°	11952.3	86.2
0°-90°	13860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7060	7060	7060	7060	7060	
5°	6938	6930	6930	6921	6921	659
15°	6489	6489	6424	6358	6334	1824
25°	5624	5591	5501	5305	5158	2582
35°	4562	4530	4310	3983	3885	2852
45°	3502	3428	3134	2873	2759	2697
55°	2432	2359	2138	1885	1788	2182
65°	1445	1363	1232	1257	1045	1424
75°	580	539	506	482	530	621
85°	82	90	98	106	114	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7060.1	7060.1	7060.1	7060.1	7060.1
2.5°	7011.1	7011.1	7011.1	7003.0	7003.0
5°	6937.7	6929.5	6929.5	6921.3	6921.3
7.5°	6880.5	6872.4	6864.2	6856.0	6839.7
10°	6798.9	6798.9	6790.8	6749.9	6741.8
12.5°	6668.3	6660.2	6627.5	6570.4	6554.1
15°	6488.8	6488.8	6423.5	6358.2	6333.7
17.5°	6292.9	6284.7	6203.1	6137.8	6105.1
20°	6080.7	6064.3	5982.7	5876.6	5819.5
22.5°	5844.0	5844.0	5746.0	5607.3	5550.1
25°	5623.6	5590.9	5501.2	5305.3	5158.4
27.5°	5370.6	5321.6	5223.7	4946.2	4774.7
30°	5093.1	5068.6	4929.8	4570.7	4440.1
32.5°	4831.9	4791.1	4644.2	4268.7	4162.6
35°	4562.5	4529.9	4309.5	3983.0	3885.1
37.5°	4293.2	4252.4	3974.9	3713.7	3591.3
40°	4023.8	3974.9	3672.9	3436.2	3305.6
42.5°	3770.8	3705.5	3411.7	3158.7	3011.8
45°	3501.5	3428.0	3134.2	2873.0	2758.7
47.5°	3232.1	3166.8	2897.5	2628.2	2497.6
50°	2946.5	2889.3	2644.5	2375.1	2236.4
52.5°	2709.8	2620.0	2383.3	2113.9	1999.7
55°	2432.3	2358.8	2138.4	1885.4	1787.5
57.5°	2179.2	2105.8	1901.7	1665.0	1583.4
60°	1942.5	1836.4	1665.0	1461.0	1395.7
62.5°	1681.4	1599.7	1452.8	1281.4	1363.0
65°	1444.7	1363.0	1232.5	1256.9	1044.7
67.5°	1183.5	1142.7	1028.4	914.1	881.5
70°	963.1	914.1	873.3	750.9	718.3
72.5°	767.2	718.3	661.1	595.8	571.3
75°	579.5	538.7	506.0	481.6	530.5
77.5°	399.9	383.6	359.1	334.6	326.5
80°	261.2	253.0	244.9	236.7	228.5
82.5°	155.1	155.1	155.1	155.1	155.1
85°	81.6	89.8	97.9	106.1	114.3
87.5°	49.0	49.0	57.1	65.3	73.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)