

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: P563390

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563390
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-LD4-3LO-50-UNV-80-97-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7466.0 lumens
Efficiency: N/A
Efficacy: 106.4 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

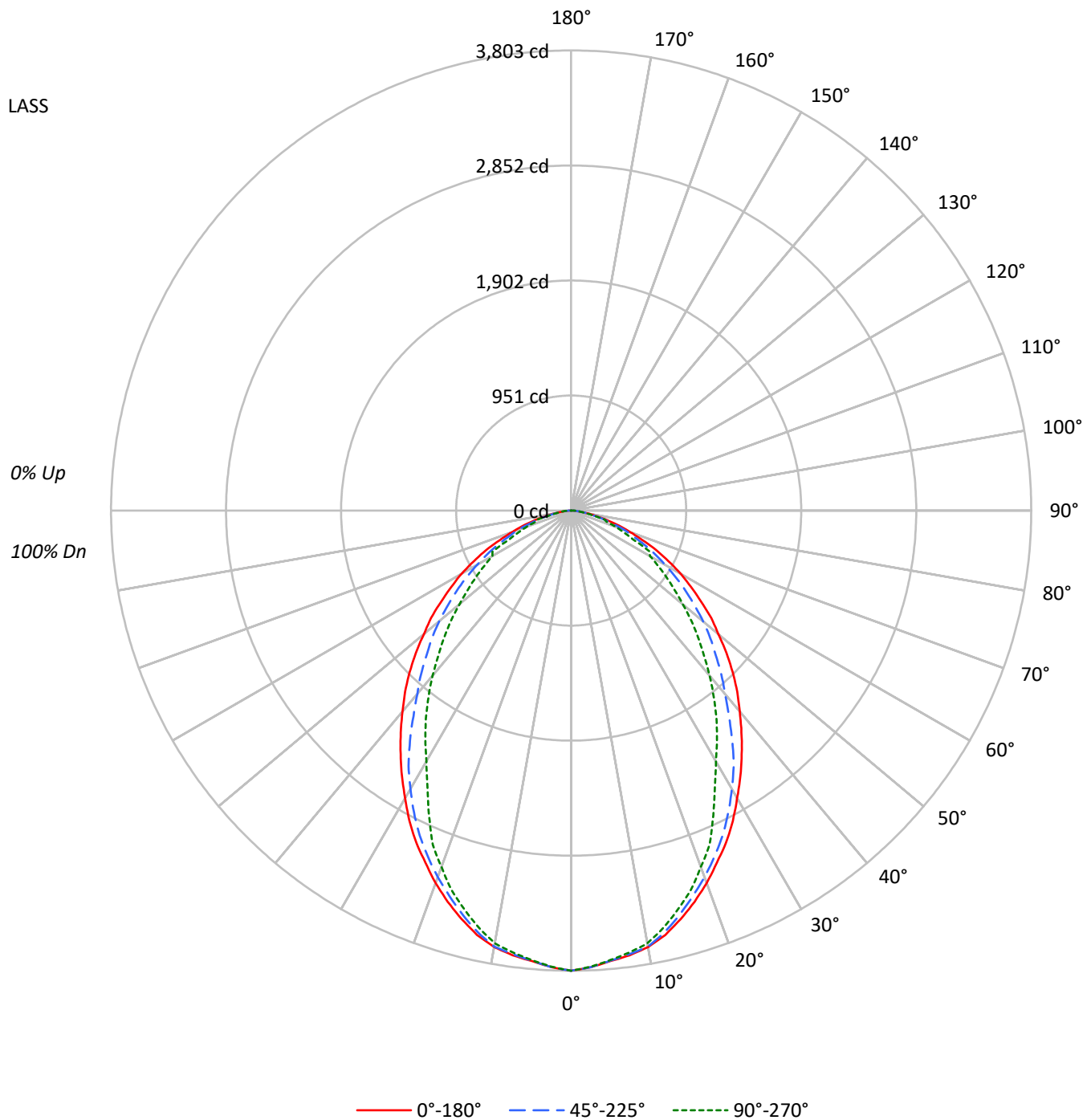
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5117	5117	5117
5°	5047	5041	5036
10°	5004	4998	4962
15°	4869	4820	4752
20°	4690	4614	4489
25°	4497	4399	4125
30°	4262	4126	3716
35°	4037	3813	3438
40°	3807	3475	3127
45°	3589	3213	2828
50°	3322	2982	2522
55°	3073	2702	2259
60°	2816	2414	2023
65°	2478	2114	1792
70°	2041	1851	1522
75°	1623	1417	1486
80°	1090	1022	954
85°	679	815	951

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3589 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	354.0	4.7
10°-20°	971.6	13.0
20°-30°	1345.1	18.0
30°-40°	1434.2	19.2
40°-50°	1308.4	17.5
50°-60°	1025.0	13.7
60°-70°	668.1	8.9
70°-80°	296.0	4.0
80°-90°	63.6	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°	2670.7	35.8
0°-40°	4104.9	55.0
0°-60°	6438.4	86.2
0°-90°	7466.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7466.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3803	3803	3803	3803	3803	
5°	3737	3733	3733	3728	3728	355
15°	3495	3495	3460	3425	3412	983
25°	3029	3012	2963	2858	2779	1391
35°	2458	2440	2321	2146	2093	1537
45°	1886	1847	1688	1548	1486	1453
55°	1310	1271	1152	1016	963	1175
65°	778	734	664	677	563	767
75°	312	290	273	259	286	335
85°	44	48	53	57	62	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3803.1	3803.1	3803.1	3803.1	3803.1
2.5°	3776.7	3776.7	3776.7	3772.3	3772.3
5°	3737.1	3732.7	3732.7	3728.3	3728.3
7.5°	3706.4	3702.0	3697.6	3693.2	3684.4
10°	3662.4	3662.4	3658.0	3636.0	3631.6
12.5°	3592.0	3587.6	3570.1	3539.3	3530.5
15°	3495.3	3495.3	3460.1	3425.0	3411.8
17.5°	3389.8	3385.4	3341.4	3306.3	3288.7
20°	3275.5	3266.7	3222.7	3165.6	3134.8
22.5°	3148.0	3148.0	3095.2	3020.5	2989.7
25°	3029.3	3011.7	2963.3	2857.8	2778.7
27.5°	2893.0	2866.6	2813.8	2664.4	2572.0
30°	2743.5	2730.3	2655.6	2462.1	2391.8
32.5°	2602.8	2580.8	2501.7	2299.4	2242.3
35°	2457.7	2440.1	2321.4	2145.6	2092.8
37.5°	2312.6	2290.6	2141.2	2000.5	1934.5
40°	2167.5	2141.2	1978.5	1851.0	1780.6
42.5°	2031.2	1996.1	1837.8	1701.5	1622.4
45°	1886.2	1846.6	1688.3	1547.6	1486.1
47.5°	1741.1	1705.9	1560.8	1415.7	1345.4
50°	1587.2	1556.4	1424.5	1279.4	1204.7
52.5°	1459.7	1411.3	1283.8	1138.7	1077.2
55°	1310.2	1270.6	1151.9	1015.6	962.9
57.5°	1173.9	1134.3	1024.4	896.9	852.9
60°	1046.4	989.2	896.9	787.0	751.8
62.5°	905.7	861.7	782.6	690.3	734.2
65°	778.2	734.2	663.9	677.1	562.8
67.5°	637.5	615.5	554.0	492.4	474.8
70°	518.8	492.4	470.4	404.5	386.9
72.5°	413.3	386.9	356.1	321.0	307.8
75°	312.2	290.2	272.6	259.4	285.8
77.5°	215.4	206.6	193.5	180.3	175.9
80°	140.7	136.3	131.9	127.5	123.1
82.5°	83.5	83.5	83.5	83.5	83.5
85°	44.0	48.4	52.8	57.2	61.6
87.5°	26.4	26.4	30.8	35.2	39.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)