

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: P562558

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562558
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-LD4-2HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7764.0 lumens
Efficiency: N/A
Efficacy: 89.9 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

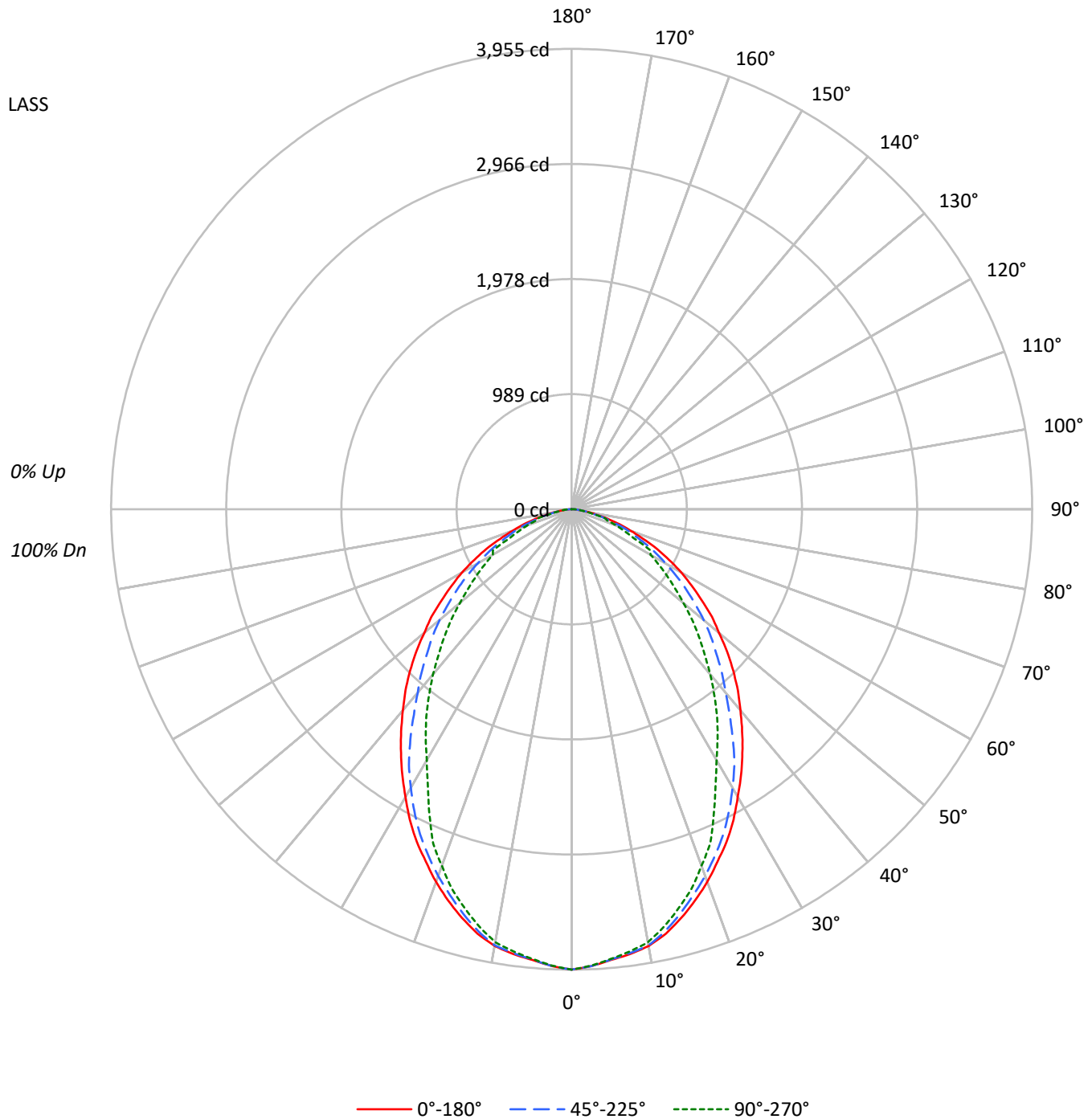
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5321	5321	5321
5°	5249	5243	5237
10°	5203	5197	5160
15°	5063	5012	4942
20°	4877	4799	4668
25°	4677	4575	4290
30°	4433	4291	3864
35°	4198	3965	3575
40°	3959	3614	3252
45°	3732	3341	2941
50°	3455	3101	2622
55°	3196	2810	2349
60°	2928	2510	2104
65°	2577	2198	1863
70°	2122	1924	1583
75°	1687	1474	1545
80°	1134	1063	992
85°	706	848	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3732 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.1	4.7
10°-20°	1010.3	13.0
20°-30°	1398.8	18.0
30°-40°	1491.5	19.2
40°-50°	1360.7	17.5
50°-60°	1066.0	13.7
60°-70°	694.7	8.9
70°-80°	307.8	4.0
80°-90°	66.1	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°	2777.2	35.8
0°-40°	4268.7	55.0
0°-60°	6695.4	86.2
0°-90°	7764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7764.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3955	3955	3955	3955	3955	
5°	3886	3882	3882	3877	3877	369
15°	3635	3635	3598	3562	3548	1022
25°	3150	3132	3082	2972	2890	1446
35°	2556	2538	2414	2231	2176	1598
45°	1961	1920	1756	1609	1545	1511
55°	1362	1321	1198	1056	1001	1222
65°	809	764	690	704	585	798
75°	325	302	284	270	297	348
85°	46	50	55	59	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3954.9	3954.9	3954.9	3954.9	3954.9
2.5°	3927.4	3927.4	3927.4	3922.9	3922.9
5°	3886.3	3881.7	3881.7	3877.2	3877.2
7.5°	3854.3	3849.7	3845.1	3840.6	3831.4
10°	3808.6	3808.6	3804.0	3781.1	3776.6
12.5°	3735.4	3730.8	3712.6	3680.6	3671.4
15°	3634.8	3634.8	3598.3	3561.7	3548.0
17.5°	3525.1	3520.5	3474.8	3438.2	3419.9
20°	3406.2	3397.1	3351.4	3291.9	3259.9
22.5°	3273.6	3273.6	3218.8	3141.0	3109.0
25°	3150.2	3131.9	3081.6	2971.9	2889.6
27.5°	3008.5	2981.0	2926.2	2770.7	2674.7
30°	2853.0	2839.3	2761.6	2560.4	2487.2
32.5°	2706.7	2683.8	2601.5	2391.2	2331.8
35°	2555.8	2537.5	2414.1	2231.2	2176.3
37.5°	2404.9	2382.1	2226.6	2080.3	2011.7
40°	2254.1	2226.6	2057.5	1924.9	1851.7
42.5°	2112.3	2075.7	1911.1	1769.4	1687.1
45°	1961.4	1920.3	1755.7	1609.4	1545.4
47.5°	1810.6	1774.0	1623.1	1472.2	1399.1
50°	1650.5	1618.5	1481.4	1330.5	1252.8
52.5°	1517.9	1467.6	1335.1	1184.2	1120.2
55°	1362.5	1321.3	1197.9	1056.2	1001.3
57.5°	1220.8	1179.6	1065.3	932.7	887.0
60°	1088.2	1028.7	932.7	818.4	781.8
62.5°	941.9	896.1	813.8	717.8	763.5
65°	809.3	763.5	690.4	704.1	585.2
67.5°	663.0	640.1	576.1	512.1	493.8
70°	539.5	512.1	489.2	420.6	402.3
72.5°	429.8	402.3	370.3	333.8	320.0
75°	324.6	301.8	283.5	269.8	297.2
77.5°	224.0	214.9	201.2	187.5	182.9
80°	146.3	141.7	137.2	132.6	128.0
82.5°	86.9	86.9	86.9	86.9	86.9
85°	45.7	50.3	54.9	59.4	64.0
87.5°	27.4	27.4	32.0	36.6	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)