

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: P564031

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564031
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-LD4-4STD-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14918.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

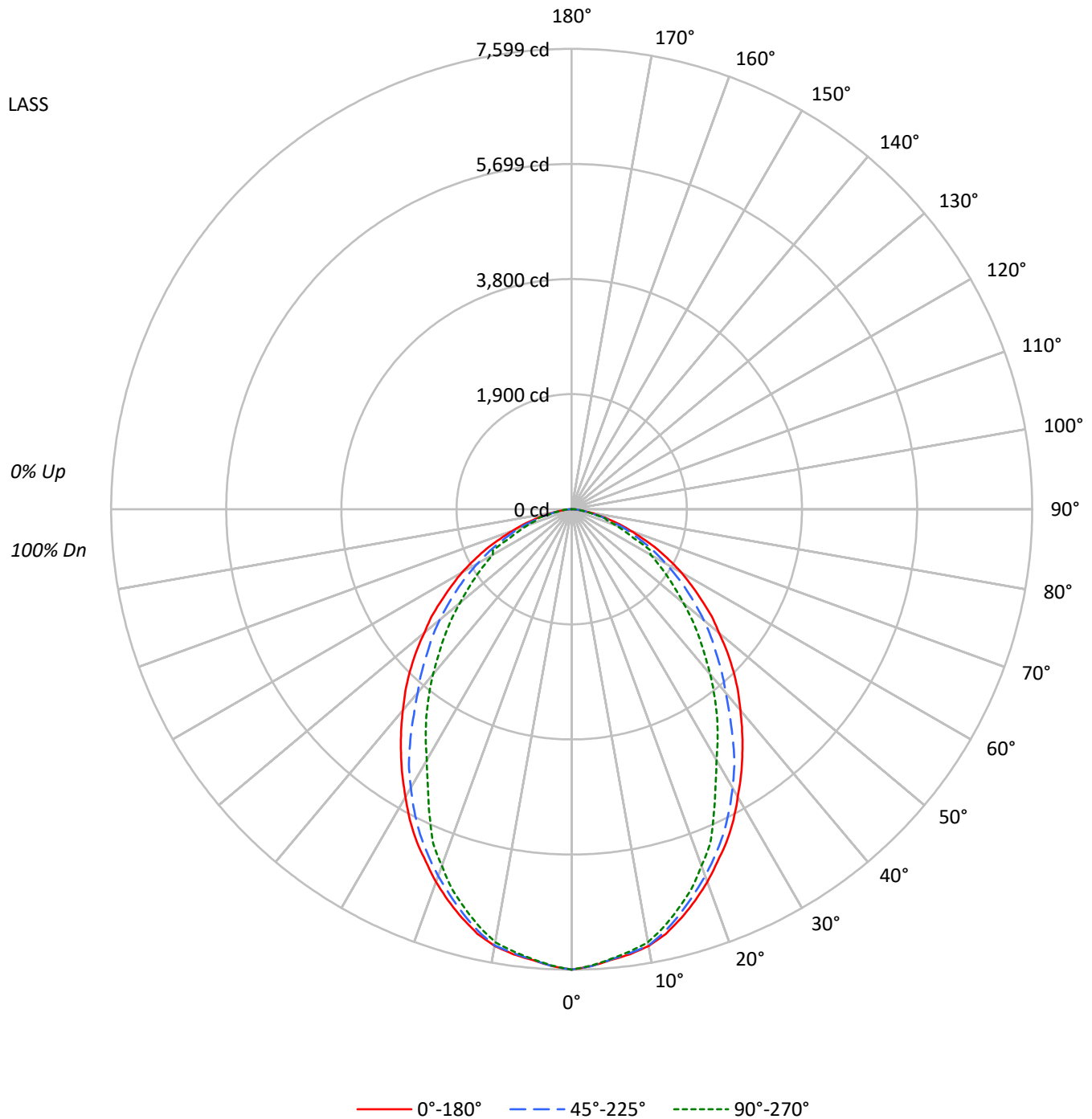
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10224	10224	10224
5°	10086	10074	10062
10°	9998	9986	9914
15°	9729	9631	9496
20°	9371	9220	8969
25°	8986	8790	8243
30°	8517	8244	7425
35°	8066	7619	6869
40°	7607	6944	6249
45°	7171	6419	5650
50°	6638	5958	5039
55°	6141	5399	4513
60°	5626	4823	4042
65°	4950	4223	3580
70°	4078	3698	3041
75°	3242	2832	2968
80°	2178	2042	1906
85°	1357	1627	1899

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7171 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	707.4	4.7
10°-20°	1941.3	13.0
20°-30°	2687.6	18.0
30°-40°	2865.8	19.2
40°-50°	2614.4	17.5
50°-60°	2048.2	13.7
60°-70°	1334.9	8.9
70°-80°	591.4	4.0
80°-90°	127.0	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°	5336.3	35.8
0°-40°	8202.1	55.0
0°-60°	12864.7	86.2
0°-90°	14918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7599	7599	7599	7599	7599	
5°	7467	7458	7458	7450	7450	709
15°	6984	6984	6914	6844	6817	1963
25°	6053	6018	5921	5710	5552	2779
35°	4911	4876	4638	4287	4182	3070
45°	3769	3690	3373	3092	2969	2903
55°	2618	2539	2302	2029	1924	2348
65°	1555	1467	1326	1353	1124	1532
75°	624	580	545	518	571	668
85°	88	97	105	114	123	122
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7599.0	7599.0	7599.0	7599.0	7599.0
2.5°	7546.3	7546.3	7546.3	7537.5	7537.5
5°	7467.3	7458.5	7458.5	7449.7	7449.7
7.5°	7405.8	7397.0	7388.2	7379.4	7361.8
10°	7317.9	7317.9	7309.1	7265.2	7256.4
12.5°	7177.3	7168.6	7133.4	7071.9	7054.4
15°	6984.1	6984.1	6913.8	6843.5	6817.2
17.5°	6773.2	6764.5	6676.6	6606.3	6571.2
20°	6544.8	6527.3	6439.4	6325.2	6263.7
22.5°	6290.1	6290.1	6184.6	6035.3	5973.8
25°	6052.9	6017.7	5921.1	5710.3	5552.1
27.5°	5780.5	5727.8	5622.4	5323.7	5139.2
30°	5481.8	5455.5	5306.1	4919.6	4779.0
32.5°	5200.7	5156.8	4998.7	4594.6	4480.4
35°	4910.8	4875.7	4638.5	4287.1	4181.7
37.5°	4620.9	4577.0	4278.3	3997.2	3865.4
40°	4331.0	4278.3	3953.3	3698.5	3557.9
42.5°	4058.7	3988.4	3672.1	3399.8	3241.7
45°	3768.8	3689.7	3373.4	3092.3	2969.3
47.5°	3478.9	3408.6	3118.7	2828.8	2688.2
50°	3171.4	3109.9	2846.3	2556.4	2407.1
52.5°	2916.6	2820.0	2565.2	2275.3	2152.3
55°	2617.9	2538.9	2301.7	2029.3	1923.9
57.5°	2345.6	2266.5	2046.9	1792.1	1704.3
60°	2090.8	1976.6	1792.1	1572.5	1502.2
62.5°	1809.7	1721.9	1563.7	1379.2	1467.1
65°	1554.9	1467.1	1326.5	1352.9	1124.5
67.5°	1273.8	1229.9	1106.9	983.9	948.8
70°	1036.6	983.9	940.0	808.2	773.1
72.5°	825.8	773.1	711.6	641.3	615.0
75°	623.7	579.8	544.7	518.3	571.0
77.5°	430.5	412.9	386.5	360.2	351.4
80°	281.1	272.3	263.6	254.8	246.0
82.5°	166.9	166.9	166.9	166.9	166.9
85°	87.9	96.6	105.4	114.2	123.0
87.5°	52.7	52.7	61.5	70.3	79.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)