

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: P563645

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563645
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-LD4-4HI-35-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

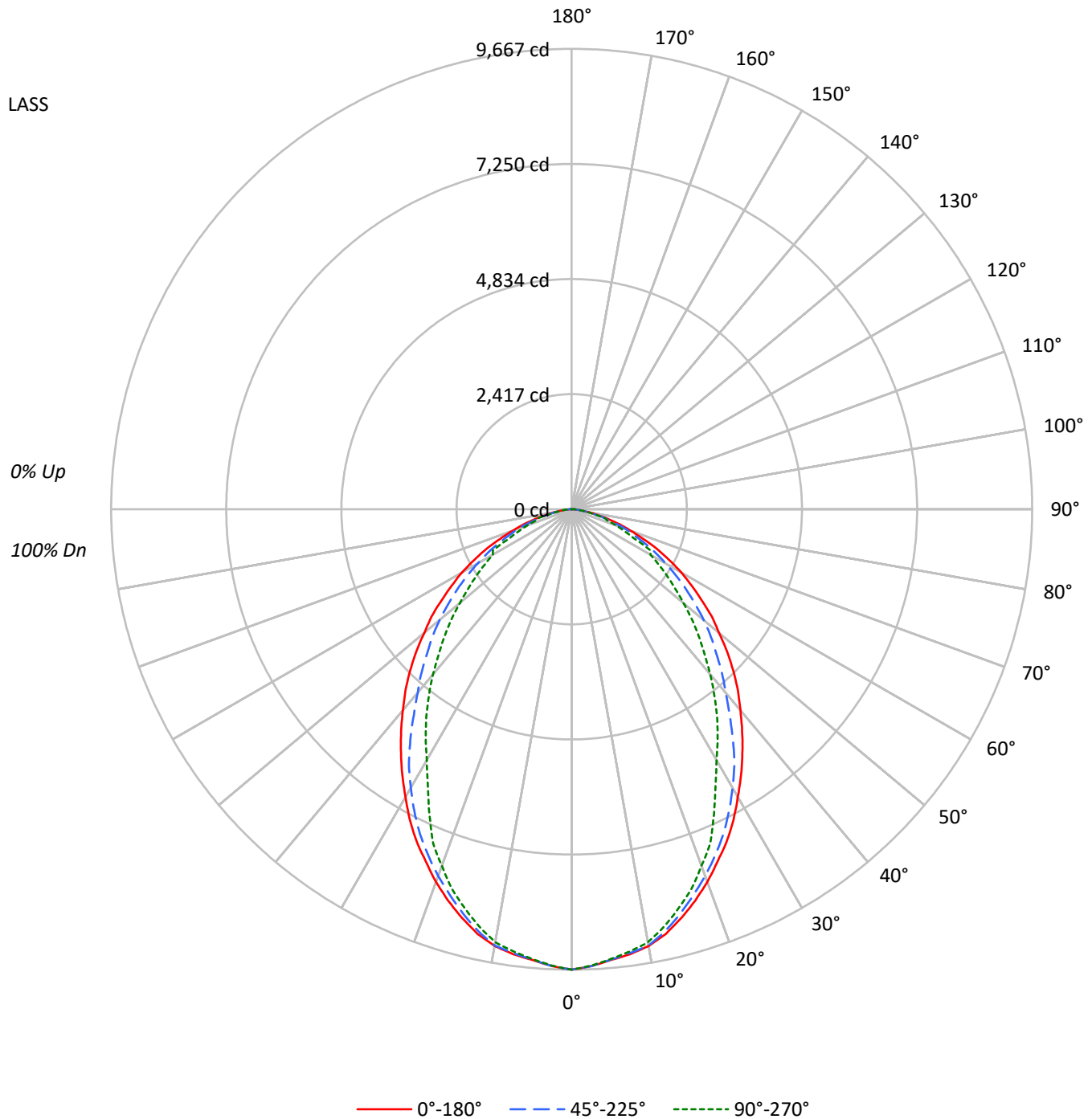
Lumens per Lamp: N/A
Luminaire Lumens: 18978.0 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	13007	13007	13007
5°	12830	12815	12800
10°	12719	12704	12612
15°	12376	12252	12080
20°	11921	11729	11409
25°	11432	11183	10486
30°	10835	10487	9446
35°	10261	9692	8738
40°	9677	8833	7950
45°	9123	8166	7188
50°	8445	7580	6410
55°	7812	6869	5741
60°	7158	6135	5143
65°	6298	5373	4554
70°	5188	4704	3869
75°	4125	3602	3776
80°	2771	2598	2424
85°	1726	2070	2416

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9123 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	899.9	4.7
10°-20°	2469.6	13.0
20°-30°	3419.1	18.0
30°-40°	3645.7	19.2
40°-50°	3325.9	17.5
50°-60°	2605.6	13.7
60°-70°	1698.2	8.9
70°-80°	752.4	4.0
80°-90°	161.5	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°	6788.6	35.8
0°-40°	10434.3	55.0
0°-60°	16365.9	86.2
0°-90°	18978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18978.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9667	9667	9667	9667	9667	
5°	9500	9488	9488	9477	9477	902
15°	8885	8885	8795	8706	8672	2498
25°	7700	7656	7532	7264	7063	3535
35°	6247	6203	5901	5454	5320	3906
45°	4794	4694	4292	3934	3777	3693
55°	3330	3230	2928	2582	2448	2987
65°	1978	1866	1688	1721	1430	1949
75°	794	738	693	659	726	850
85°	112	123	134	145	156	155
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9667.1	9667.1	9667.1	9667.1	9667.1
2.5°	9600.1	9600.1	9600.1	9588.9	9588.9
5°	9499.5	9488.3	9488.3	9477.1	9477.1
7.5°	9421.3	9410.1	9398.9	9387.7	9365.4
10°	9309.5	9309.5	9298.3	9242.5	9231.3
12.5°	9130.7	9119.5	9074.8	8996.6	8974.2
15°	8884.8	8884.8	8795.4	8706.0	8672.5
17.5°	8616.6	8605.4	8493.7	8404.3	8359.6
20°	8326.0	8303.7	8191.9	8046.6	7968.4
22.5°	8001.9	8001.9	7867.8	7677.8	7599.6
25°	7700.2	7655.5	7532.5	7264.3	7063.2
27.5°	7353.7	7286.7	7152.6	6772.6	6537.9
30°	6973.8	6940.2	6750.2	6258.5	6079.7
32.5°	6616.1	6560.2	6359.1	5845.0	5699.7
35°	6247.3	6202.6	5900.9	5453.8	5319.7
37.5°	5878.5	5822.6	5442.7	5085.0	4917.4
40°	5509.7	5442.7	5029.1	4705.0	4526.2
42.5°	5163.3	5073.9	4671.5	4325.1	4123.9
45°	4794.5	4693.9	4291.5	3933.9	3777.4
47.5°	4425.7	4336.2	3967.4	3598.6	3419.8
50°	4034.5	3956.3	3621.0	3252.2	3062.2
52.5°	3710.4	3587.5	3263.4	2894.6	2738.1
55°	3330.4	3229.8	2928.1	2581.6	2447.5
57.5°	2984.0	2883.4	2604.0	2279.9	2168.1
60°	2659.9	2514.6	2279.9	2000.5	1911.1
62.5°	2302.2	2190.5	1989.3	1754.6	1866.4
65°	1978.1	1866.4	1687.6	1721.1	1430.5
67.5°	1620.5	1564.6	1408.2	1251.7	1207.0
70°	1318.8	1251.7	1195.8	1028.2	983.5
72.5°	1050.5	983.5	905.2	815.8	782.3
75°	793.5	737.6	692.9	659.4	726.4
77.5°	547.6	525.3	491.7	458.2	447.0
80°	357.6	346.5	335.3	324.1	312.9
82.5°	212.3	212.3	212.3	212.3	212.3
85°	111.8	122.9	134.1	145.3	156.5
87.5°	67.1	67.1	78.2	89.4	100.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)