

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: P563447

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563447
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-LD4-3STD-35-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10977.0 lumens
Efficiency: N/A
Efficacy: 109.9 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

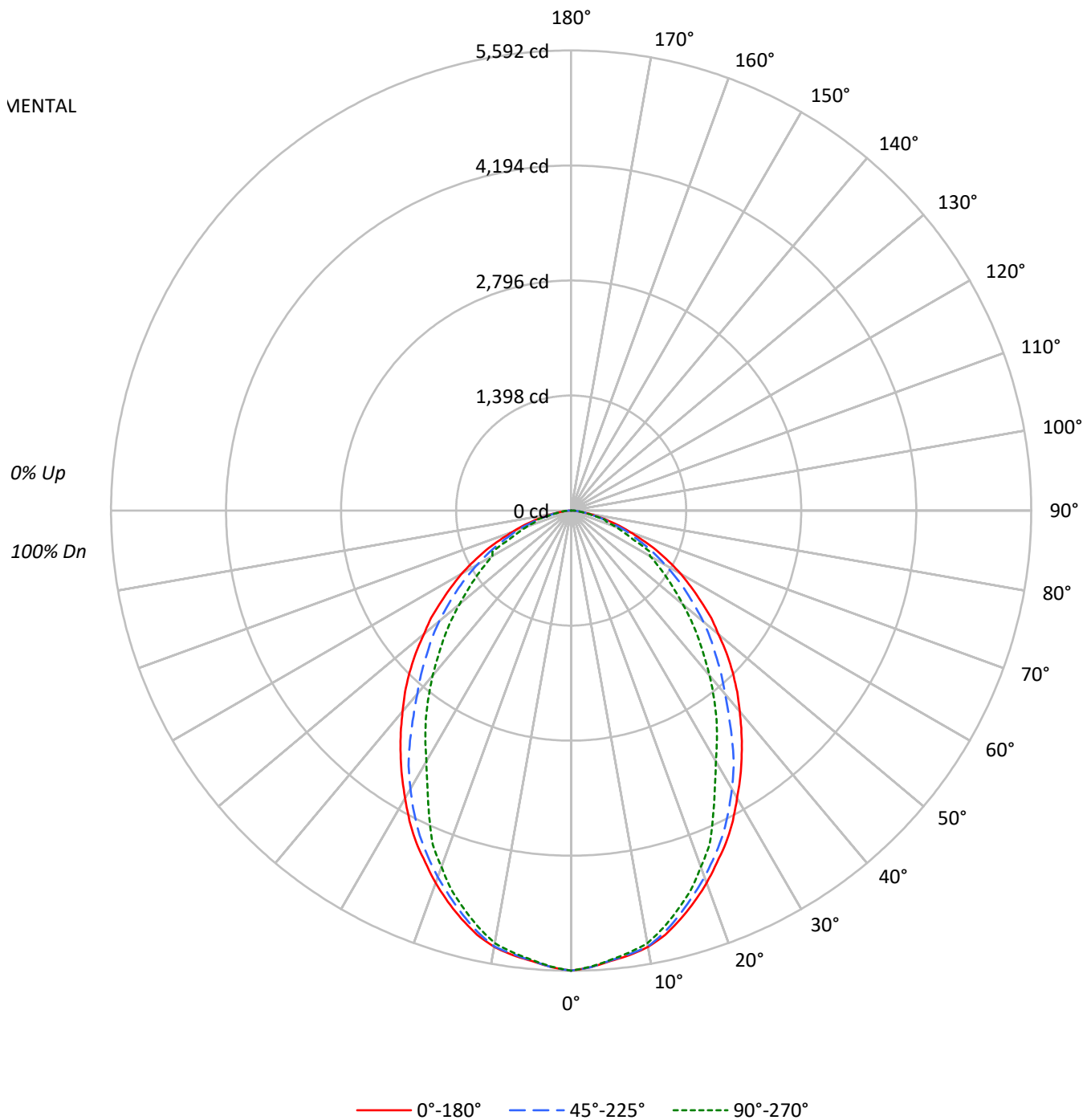
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7523	7523	7523
5°	7421	7412	7404
10°	7357	7348	7295
15°	7158	7086	6987
20°	6895	6784	6599
25°	6612	6468	6065
30°	6267	6066	5463
35°	5935	5606	5054
40°	5598	5109	4598
45°	5277	4723	4157
50°	4885	4384	3707
55°	4519	3973	3321
60°	4140	3549	2975
65°	3643	3108	2634
70°	3001	2721	2238
75°	2386	2084	2184
80°	1603	1502	1402
85°	997	1198	1397

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5277 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	520.5	4.7
10°-20°	1428.5	13.0
20°-30°	1977.6	18.0
30°-40°	2108.7	19.2
40°-50°	1923.8	17.5
50°-60°	1507.1	13.7
60°-70°	982.3	8.9
70°-80°	435.2	4.0
80°-90°	93.4	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°	3926.6	35.8
0°-40°	6035.3	55.0
0°-60°	9466.1	86.2
0°-90°	10977.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10977.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5592	5592	5592	5592	5592	
5°	5495	5488	5488	5482	5482	522
15°	5139	5139	5087	5036	5016	1445
25°	4454	4428	4357	4202	4085	2045
35°	3614	3588	3413	3154	3077	2259
45°	2773	2715	2482	2275	2185	2136
55°	1926	1868	1694	1493	1416	1728
65°	1144	1080	976	996	827	1128
75°	459	427	401	381	420	492
85°	65	71	78	84	90	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5591.5	5591.5	5591.5	5591.5	5591.5
2.5°	5552.8	5552.8	5552.8	5546.3	5546.3
5°	5494.6	5488.1	5488.1	5481.6	5481.6
7.5°	5449.3	5442.9	5436.4	5429.9	5417.0
10°	5384.7	5384.7	5378.2	5345.9	5339.4
12.5°	5281.3	5274.8	5248.9	5203.7	5190.8
15°	5139.0	5139.0	5087.3	5035.6	5016.2
17.5°	4983.9	4977.4	4912.8	4861.1	4835.2
20°	4815.8	4802.9	4738.3	4654.2	4609.0
22.5°	4628.4	4628.4	4550.8	4440.9	4395.7
25°	4453.8	4428.0	4356.9	4201.7	4085.4
27.5°	4253.4	4214.7	4137.1	3917.3	3781.6
30°	4033.7	4014.3	3904.4	3620.0	3516.5
32.5°	3826.8	3794.5	3678.1	3380.8	3296.7
35°	3613.5	3587.6	3413.1	3154.5	3077.0
37.5°	3400.2	3367.9	3148.1	2941.2	2844.3
40°	3186.9	3148.1	2908.9	2721.4	2618.0
42.5°	2986.5	2934.7	2702.0	2501.6	2385.3
45°	2773.1	2715.0	2482.3	2275.4	2184.9
47.5°	2559.8	2508.1	2294.8	2081.5	1978.0
50°	2333.6	2288.3	2094.4	1881.1	1771.2
52.5°	2146.1	2075.0	1887.5	1674.2	1583.7
55°	1926.3	1868.2	1693.6	1493.2	1415.7
57.5°	1725.9	1667.8	1506.2	1318.7	1254.1
60°	1538.5	1454.4	1318.7	1157.1	1105.4
62.5°	1331.6	1267.0	1150.6	1014.9	1079.5
65°	1144.2	1079.5	976.1	995.5	827.4
67.5°	937.3	905.0	814.5	724.0	698.1
70°	762.8	724.0	691.7	594.7	568.9
72.5°	607.6	568.9	523.6	471.9	452.5
75°	459.0	426.6	400.8	381.4	420.2
77.5°	316.7	303.8	284.4	265.0	258.6
80°	206.9	200.4	193.9	187.5	181.0
82.5°	122.8	122.8	122.8	122.8	122.8
85°	64.6	71.1	77.6	84.0	90.5
87.5°	38.8	38.8	45.2	51.7	58.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)