

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: P559430

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559430
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-12-1-LD4-2STD-35-UNV-81-87-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1173.0 lumens
Efficiency: N/A
Efficacy: 70.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

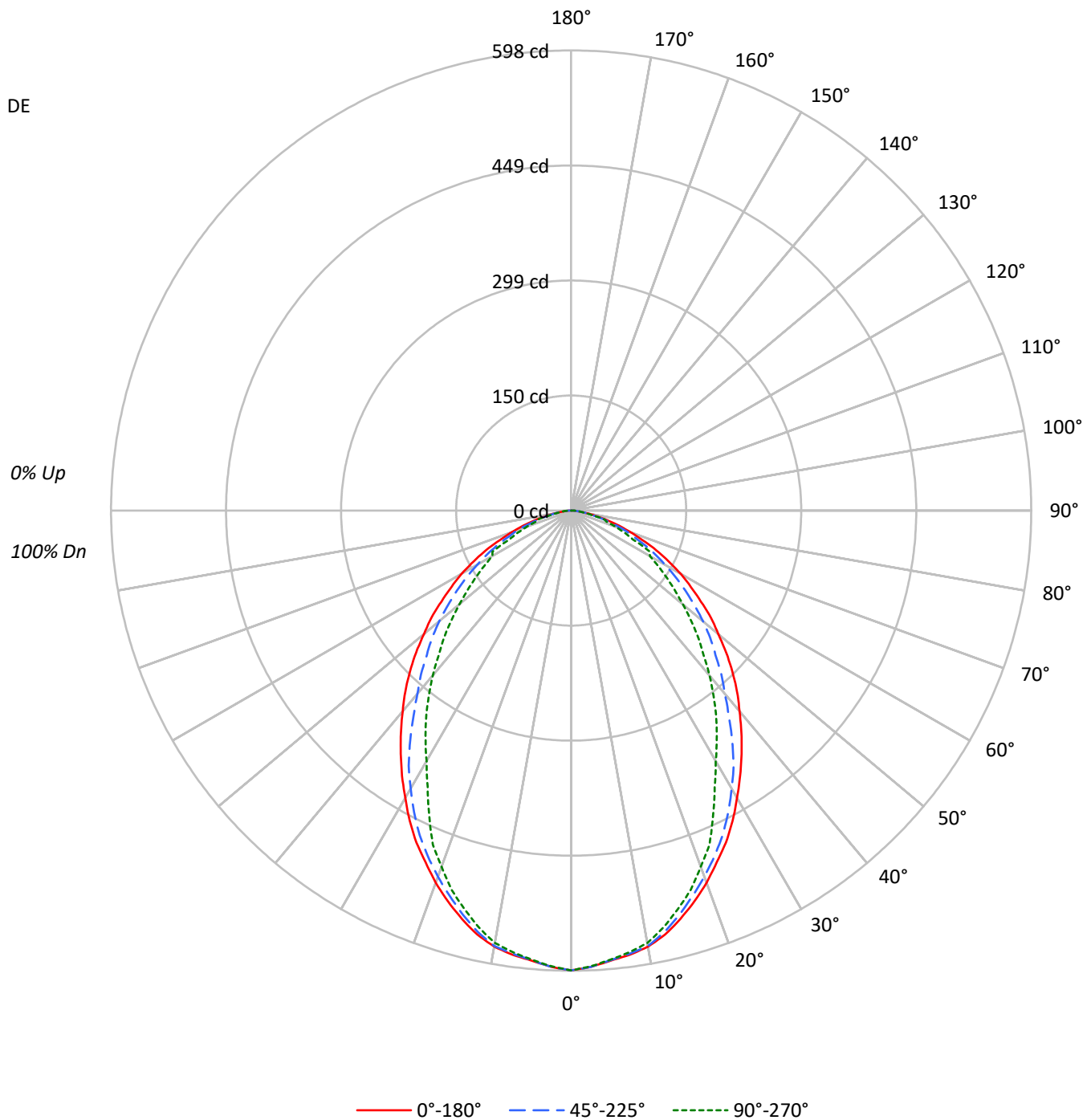
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6431	6431	6431
5°	6344	6337	6330
10°	6289	6281	6237
15°	6120	6058	5973
20°	5895	5800	5641
25°	5652	5530	5185
30°	5357	5185	4671
35°	5073	4792	4321
40°	4784	4367	3932
45°	4510	4039	3554
50°	4176	3748	3170
55°	3862	3397	2839
60°	3539	3033	2542
65°	3115	2656	2252
70°	2565	2326	1913
75°	2038	1780	1867
80°	1370	1283	1196
85°	852	1025	1198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4510 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	4.7
10°-20°	152.6	13.0
20°-30°	211.3	18.0
30°-40°	225.3	19.2
40°-50°	205.6	17.5
50°-60°	161.0	13.7
60°-70°	105.0	8.9
70°-80°	46.5	4.0
80°-90°	10.0	0.8
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°	419.6	35.8
0°-40°	644.9	55.0
0°-60°	1011.5	86.2
0°-90°	1173.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1173.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	587	586	586	586	586	56
15°	549	549	544	538	536	154
25°	476	473	466	449	437	218
35°	386	383	365	337	329	241
45°	296	290	265	243	234	228
55°	206	200	181	160	151	185
65°	122	115	104	106	88	121
75°	49	46	43	41	45	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	597.5	597.5	597.5	597.5	597.5
2.5°	593.4	593.4	593.4	592.7	592.7
5°	587.1	586.5	586.5	585.8	585.8
7.5°	582.3	581.6	580.9	580.2	578.9
10°	575.4	575.4	574.7	571.3	570.6
12.5°	564.4	563.7	560.9	556.1	554.7
15°	549.2	549.2	543.6	538.1	536.0
17.5°	532.6	531.9	525.0	519.5	516.7
20°	514.6	513.2	506.3	497.3	492.5
22.5°	494.6	494.6	486.3	474.6	469.7
25°	475.9	473.2	465.6	449.0	436.6
27.5°	454.5	450.4	442.1	418.6	404.1
30°	431.0	429.0	417.2	386.8	375.8
32.5°	408.9	405.5	393.0	361.3	352.3
35°	386.1	383.4	364.7	337.1	328.8
37.5°	363.3	359.9	336.4	314.3	303.9
40°	340.5	336.4	310.8	290.8	279.8
42.5°	319.1	313.6	288.7	267.3	254.9
45°	296.3	290.1	265.3	243.1	233.5
47.5°	273.5	268.0	245.2	222.4	211.4
50°	249.4	244.5	223.8	201.0	189.3
52.5°	229.3	221.7	201.7	178.9	169.2
55°	205.8	199.6	181.0	159.6	151.3
57.5°	184.4	178.2	160.9	140.9	134.0
60°	164.4	155.4	140.9	123.6	118.1
62.5°	142.3	135.4	123.0	108.4	115.4
65°	122.3	115.4	104.3	106.4	88.4
67.5°	100.2	96.7	87.0	77.4	74.6
70°	81.5	77.4	73.9	63.6	60.8
72.5°	64.9	60.8	56.0	50.4	48.4
75°	49.0	45.6	42.8	40.8	44.9
77.5°	33.8	32.5	30.4	28.3	27.6
80°	22.1	21.4	20.7	20.0	19.3
82.5°	13.1	13.1	13.1	13.1	13.1
85°	6.9	7.6	8.3	9.0	9.7
87.5°	4.1	4.1	4.8	5.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)