

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: P559014

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559014
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-LD4-1STD-50-UNV-93-87-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 661.0 lumens
Efficiency: N/A
Efficacy: 79.6 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

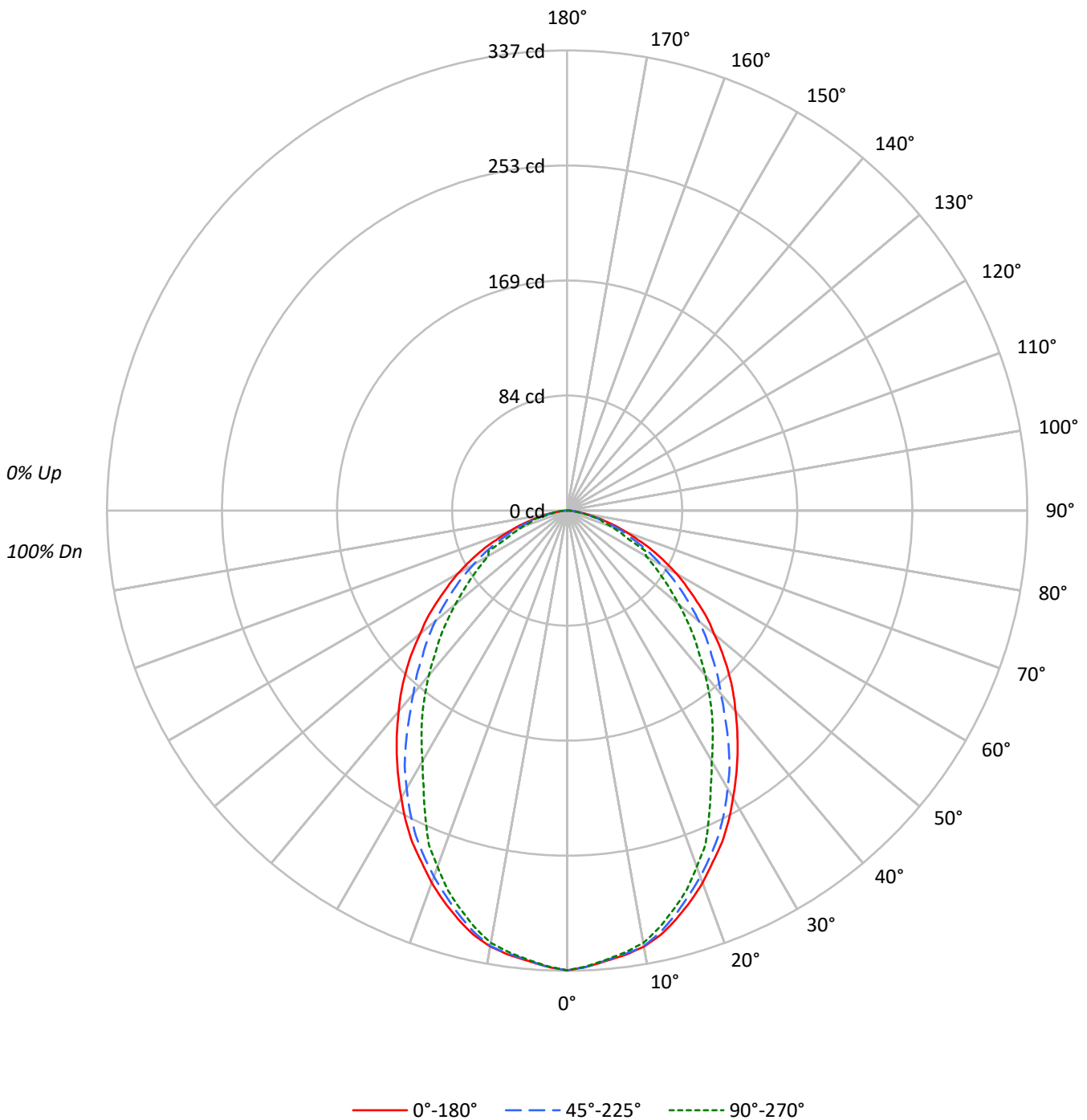
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3624	3624	3624
5°	3575	3571	3567
10°	3543	3540	3514
15°	3449	3413	3366
20°	3322	3268	3179
25°	3185	3116	2922
30°	3019	2922	2632
35°	2859	2700	2435
40°	2696	2462	2214
45°	2542	2276	2003
50°	2353	2112	1787
55°	2177	1914	1599
60°	1993	1709	1434
65°	1755	1498	1268
70°	1445	1312	1079
75°	1148	1002	1052
80°	775	725	676
85°	482	580	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2542 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.3	4.7
10°-20°	86.0	13.0
20°-30°	119.1	18.0
30°-40°	127.0	19.2
40°-50°	115.8	17.5
50°-60°	90.8	13.7
60°-70°	59.1	8.9
70°-80°	26.2	4.0
80°-90°	5.6	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°	236.4	35.8
0°-40°	363.4	55.0
0°-60°	570.0	86.2
0°-90°	661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	337	337	337	337	337	
5°	331	330	330	330	330	31
15°	310	310	306	303	302	87
25°	268	267	262	253	246	123
35°	218	216	206	190	185	136
45°	167	164	150	137	132	129
55°	116	112	102	90	85	104
65°	69	65	59	60	50	68
75°	28	26	24	23	25	30
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	336.7	336.7	336.7	336.7	336.7
2.5°	334.4	334.4	334.4	334.0	334.0
5°	330.9	330.5	330.5	330.1	330.1
7.5°	328.1	327.8	327.4	327.0	326.2
10°	324.2	324.2	323.9	321.9	321.5
12.5°	318.0	317.6	316.1	313.3	312.6
15°	309.5	309.5	306.3	303.2	302.1
17.5°	300.1	299.7	295.8	292.7	291.2
20°	290.0	289.2	285.3	280.3	277.5
22.5°	278.7	278.7	274.0	267.4	264.7
25°	268.2	266.6	262.4	253.0	246.0
27.5°	256.1	253.8	249.1	235.9	227.7
30°	242.9	241.7	235.1	218.0	211.8
32.5°	230.4	228.5	221.5	203.6	198.5
35°	217.6	216.0	205.5	190.0	185.3
37.5°	204.7	202.8	189.6	177.1	171.3
40°	191.9	189.6	175.2	163.9	157.6
42.5°	179.8	176.7	162.7	150.6	143.6
45°	167.0	163.5	149.5	137.0	131.6
47.5°	154.1	151.0	138.2	125.3	119.1
50°	140.5	137.8	126.1	113.3	106.7
52.5°	129.2	125.0	113.7	100.8	95.4
55°	116.0	112.5	102.0	89.9	85.2
57.5°	103.9	100.4	90.7	79.4	75.5
60°	92.6	87.6	79.4	69.7	66.6
62.5°	80.2	76.3	69.3	61.1	65.0
65°	68.9	65.0	58.8	59.9	49.8
67.5°	56.4	54.5	49.0	43.6	42.0
70°	45.9	43.6	41.7	35.8	34.3
72.5°	36.6	34.3	31.5	28.4	27.2
75°	27.6	25.7	24.1	23.0	25.3
77.5°	19.1	18.3	17.1	16.0	15.6
80°	12.5	12.1	11.7	11.3	10.9
82.5°	7.4	7.4	7.4	7.4	7.4
85°	3.9	4.3	4.7	5.1	5.4
87.5°	2.3	2.3	2.7	3.1	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)