

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: P558560

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558560
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-LD4-1HI-40-UNV-93-84-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 821.0 lumens
Efficiency: N/A
Efficacy: 76.0 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

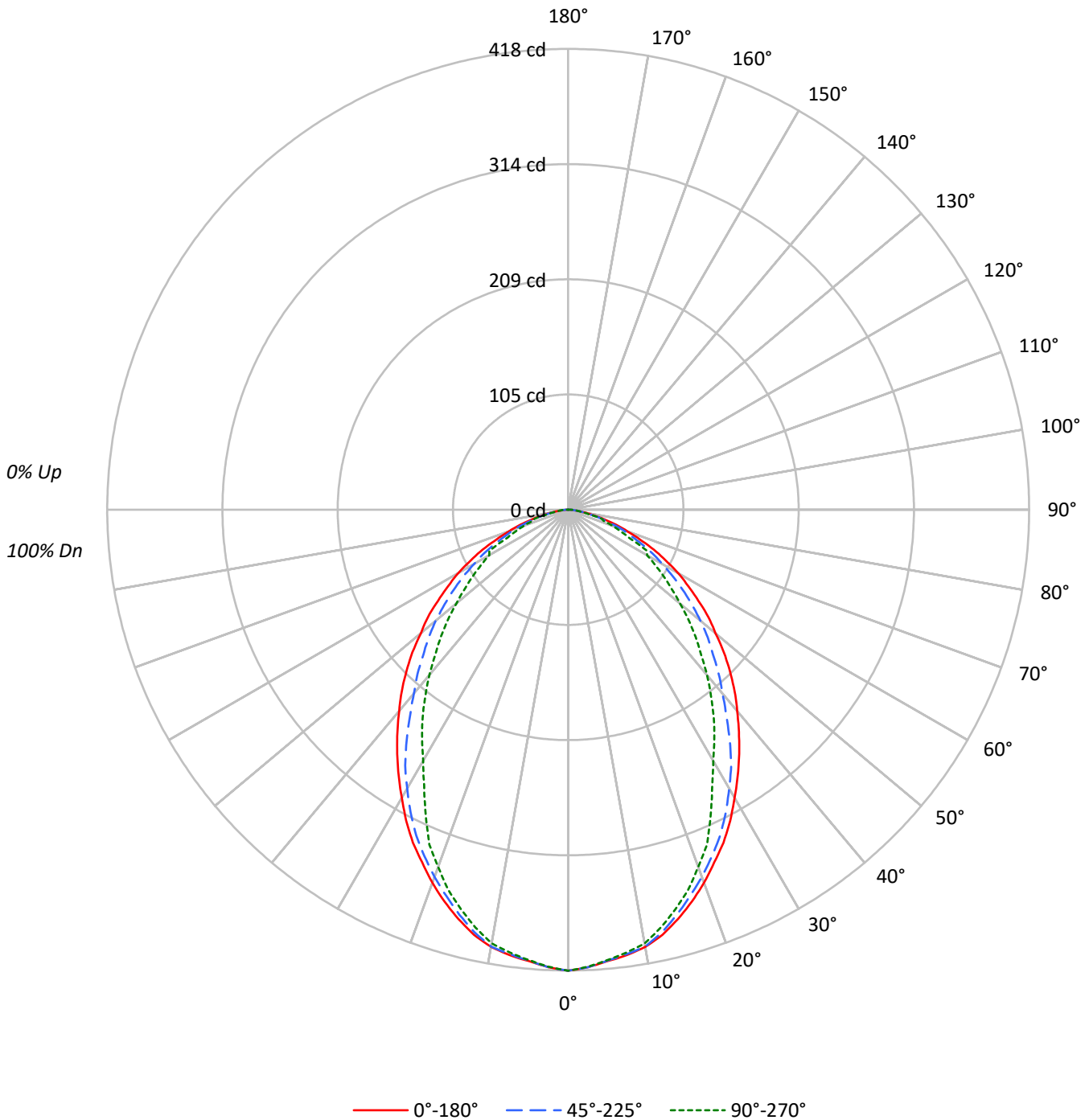
Input Watts (W): 10.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4501	4501	4501
5°	4441	4435	4430
10°	4401	4397	4365
15°	4284	4240	4181
20°	4126	4060	3948
25°	3956	3871	3630
30°	3750	3629	3269
35°	3552	3355	3024
40°	3350	3058	2751
45°	3157	2827	2487
50°	2922	2622	2219
55°	2704	2378	1987
60°	2478	2123	1780
65°	2180	1859	1577
70°	1797	1627	1338
75°	1426	1248	1306
80°	961	899	837
85°	593	716	840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3157 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.9	4.7
10°-20°	106.8	13.0
20°-30°	147.9	18.0
30°-40°	157.7	19.2
40°-50°	143.9	17.5
50°-60°	112.7	13.7
60°-70°	73.5	8.9
70°-80°	32.5	4.0
80°-90°	7.0	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°	293.7	35.8
0°-40°	451.4	55.0
0°-60°	708.0	86.2
0°-90°	821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	821.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	418	418	418	418	418	
5°	411	410	410	410	410	39
15°	384	384	380	377	375	108
25°	333	331	326	314	306	153
35°	270	268	255	236	230	169
45°	207	203	186	170	163	160
55°	144	140	127	112	106	129
65°	86	81	73	74	62	84
75°	34	32	30	28	31	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	418.2	418.2	418.2	418.2	418.2
2.5°	415.3	415.3	415.3	414.8	414.8
5°	411.0	410.5	410.5	410.0	410.0
7.5°	407.6	407.1	406.6	406.1	405.2
10°	402.7	402.7	402.3	399.8	399.4
12.5°	395.0	394.5	392.6	389.2	388.2
15°	384.4	384.4	380.5	376.6	375.2
17.5°	372.8	372.3	367.4	363.6	361.6
20°	360.2	359.2	354.4	348.1	344.7
22.5°	346.2	346.2	340.4	332.1	328.8
25°	333.1	331.2	325.9	314.3	305.6
27.5°	318.1	315.2	309.4	293.0	282.8
30°	301.7	300.2	292.0	270.7	263.0
32.5°	286.2	283.8	275.1	252.9	246.6
35°	270.3	268.3	255.3	235.9	230.1
37.5°	254.3	251.9	235.5	220.0	212.7
40°	238.4	235.5	217.6	203.5	195.8
42.5°	223.4	219.5	202.1	187.1	178.4
45°	207.4	203.1	185.7	170.2	163.4
47.5°	191.5	187.6	171.6	155.7	147.9
50°	174.5	171.2	156.6	140.7	132.5
52.5°	160.5	155.2	141.2	125.2	118.5
55°	144.1	139.7	126.7	111.7	105.9
57.5°	129.1	124.7	112.6	98.6	93.8
60°	115.1	108.8	98.6	86.5	82.7
62.5°	99.6	94.8	86.1	75.9	80.7
65°	85.6	80.7	73.0	74.5	61.9
67.5°	70.1	67.7	60.9	54.1	52.2
70°	57.1	54.1	51.7	44.5	42.5
72.5°	45.4	42.5	39.2	35.3	33.8
75°	34.3	31.9	30.0	28.5	31.4
77.5°	23.7	22.7	21.3	19.8	19.3
80°	15.5	15.0	14.5	14.0	13.5
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.8	5.3	5.8	6.3	6.8
87.5°	2.9	2.9	3.4	3.9	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)