

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: P558509

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558509
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-35-UNV-93-96-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 959.0 lumens
Efficiency: N/A
Efficacy: 88.8 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

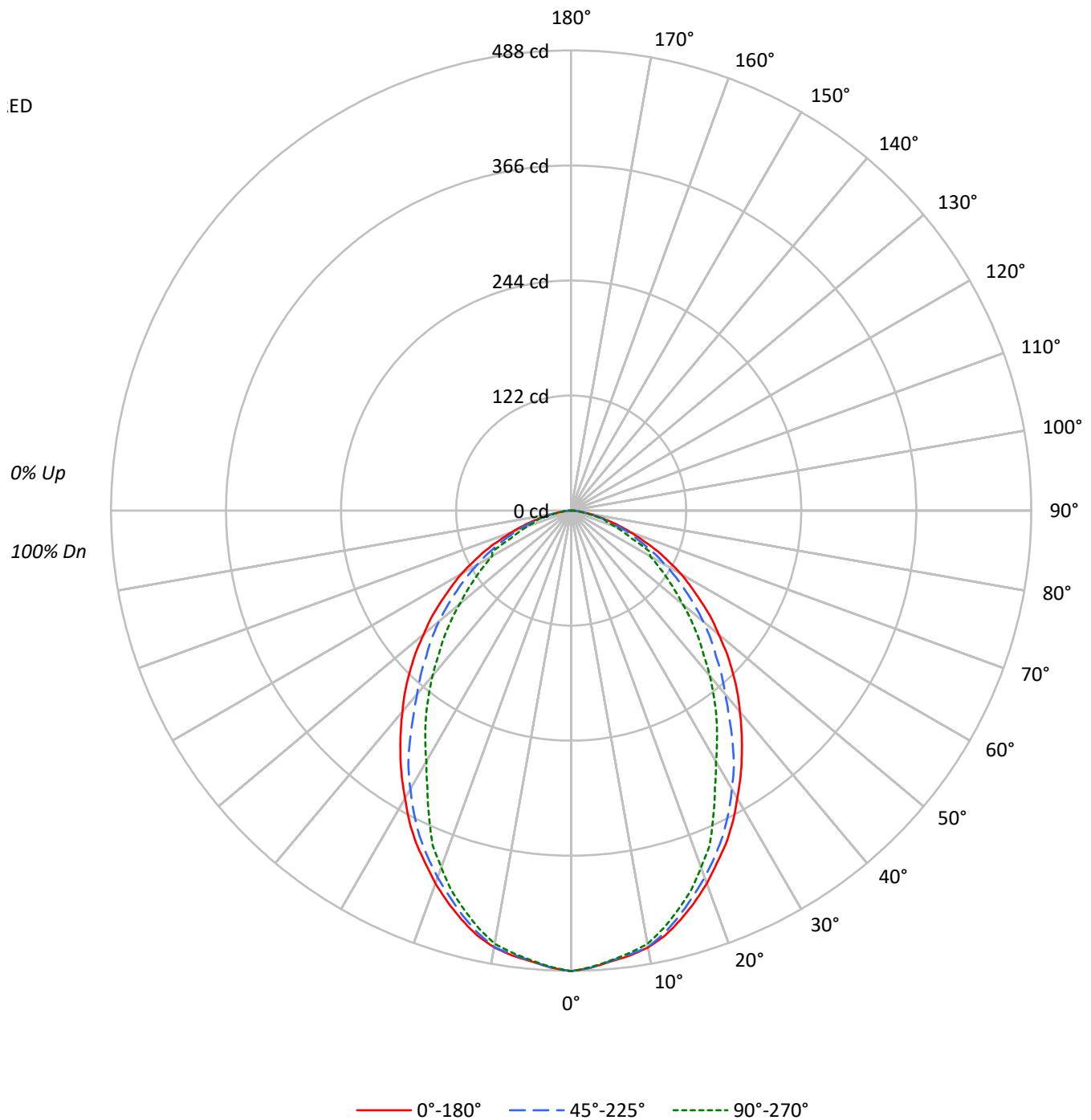
Input Watts (W): 10.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5258	5258	5258
5°	5186	5181	5175
10°	5141	5136	5099
15°	5003	4953	4883
20°	4819	4742	4613
25°	4621	4520	4239
30°	4380	4240	3818
35°	4148	3918	3532
40°	3912	3570	3214
45°	3688	3302	2906
50°	3414	3064	2591
55°	3158	2777	2321
60°	2893	2480	2080
65°	2547	2173	1841
70°	2096	1901	1564
75°	1668	1456	1526
80°	1122	1048	979
85°	692	840	976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3688 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.5	4.7
10°-20°	124.8	13.0
20°-30°	172.8	18.0
30°-40°	184.2	19.2
40°-50°	168.1	17.5
50°-60°	131.7	13.7
60°-70°	85.8	8.9
70°-80°	38.0	4.0
80°-90°	8.2	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°	343.0	35.8
0°-40°	527.3	55.0
0°-60°	827.0	86.2
0°-90°	959.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	959.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	488	488	488	488	488	
5°	480	480	480	479	479	46
15°	449	449	444	440	438	126
25°	389	387	381	367	357	179
35°	316	313	298	276	269	197
45°	242	237	217	199	191	187
55°	168	163	148	130	124	151
65°	100	94	85	87	72	99
75°	40	37	35	33	37	43
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	488.5	488.5	488.5	488.5	488.5
2.5°	485.1	485.1	485.1	484.5	484.5
5°	480.0	479.5	479.5	478.9	478.9
7.5°	476.1	475.5	474.9	474.4	473.3
10°	470.4	470.4	469.9	467.0	466.5
12.5°	461.4	460.8	458.6	454.6	453.5
15°	449.0	449.0	444.5	439.9	438.2
17.5°	435.4	434.9	429.2	424.7	422.4
20°	420.7	419.6	414.0	406.6	402.7
22.5°	404.4	404.4	397.6	388.0	384.0
25°	389.1	386.8	380.6	367.1	356.9
27.5°	371.6	368.2	361.4	342.2	330.4
30°	352.4	350.7	341.1	316.3	307.2
32.5°	334.3	331.5	321.3	295.4	288.0
35°	315.7	313.4	298.2	275.6	268.8
37.5°	297.1	294.2	275.0	257.0	248.5
40°	278.4	275.0	254.1	237.8	228.7
42.5°	260.9	256.4	236.1	218.6	208.4
45°	242.3	237.2	216.9	198.8	190.9
47.5°	223.6	219.1	200.5	181.8	172.8
50°	203.9	199.9	183.0	164.3	154.7
52.5°	187.5	181.3	164.9	146.3	138.4
55°	168.3	163.2	148.0	130.5	123.7
57.5°	150.8	145.7	131.6	115.2	109.6
60°	134.4	127.1	115.2	101.1	96.6
62.5°	116.3	110.7	100.5	88.7	94.3
65°	100.0	94.3	85.3	87.0	72.3
67.5°	81.9	79.1	71.2	63.3	61.0
70°	66.6	63.3	60.4	52.0	49.7
72.5°	53.1	49.7	45.7	41.2	39.5
75°	40.1	37.3	35.0	33.3	36.7
77.5°	27.7	26.5	24.8	23.2	22.6
80°	18.1	17.5	16.9	16.4	15.8
82.5°	10.7	10.7	10.7	10.7	10.7
85°	5.6	6.2	6.8	7.3	7.9
87.5°	3.4	3.4	4.0	4.5	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)