

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: P558754

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558754
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-LD4-1LO-40-UNV-93-85-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 490.0 lumens
Efficiency: N/A
Efficacy: 84.5 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

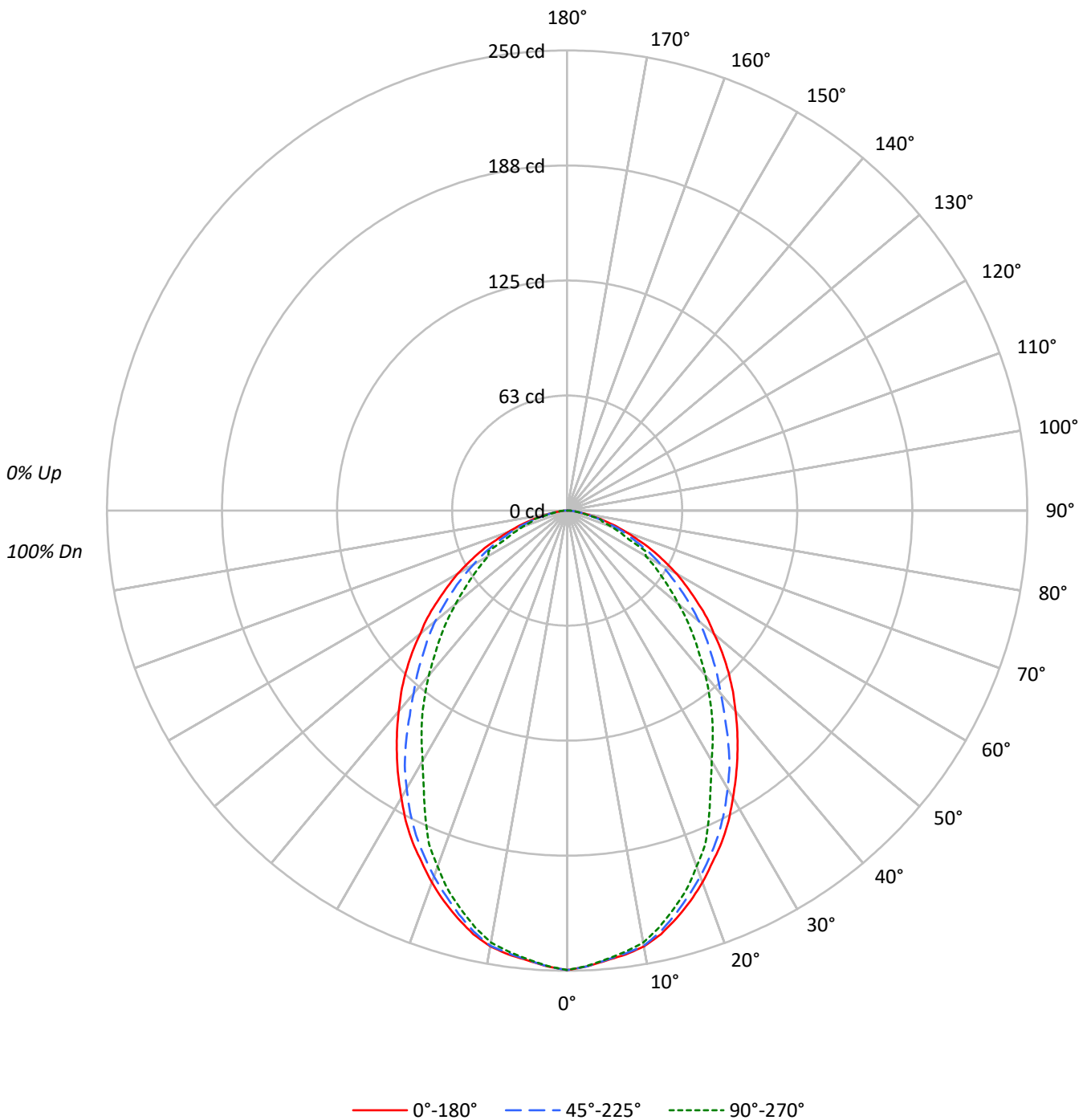
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2687	2687	2687
5°	2650	2647	2644
10°	2628	2624	2605
15°	2556	2531	2495
20°	2463	2423	2356
25°	2361	2310	2166
30°	2238	2166	1951
35°	2120	2003	1805
40°	1999	1824	1643
45°	1885	1687	1484
50°	1745	1566	1325
55°	1614	1419	1186
60°	1479	1268	1061
65°	1301	1110	940
70°	1070	972	799
75°	853	744	782
80°	570	539	502
85°	358	432	494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1885 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.2	4.7
10°-20°	63.8	13.0
20°-30°	88.3	18.0
30°-40°	94.1	19.2
40°-50°	85.9	17.5
50°-60°	67.3	13.7
60°-70°	43.9	8.9
70°-80°	19.4	4.0
80°-90°	4.2	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°	175.3	35.8
0°-40°	269.4	55.0
0°-60°	422.6	86.2
0°-90°	490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	250	250	250	250	250	
5°	245	245	245	245	245	23
15°	229	229	227	225	224	64
25°	199	198	194	188	182	91
35°	161	160	152	141	137	101
45°	124	121	111	102	98	95
55°	86	83	76	67	63	77
65°	51	48	44	44	37	50
75°	20	19	18	17	19	22
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	249.6	249.6	249.6	249.6	249.6
2.5°	247.9	247.9	247.9	247.6	247.6
5°	245.3	245.0	245.0	244.7	244.7
7.5°	243.3	243.0	242.7	242.4	241.8
10°	240.4	240.4	240.1	238.6	238.3
12.5°	235.7	235.5	234.3	232.3	231.7
15°	229.4	229.4	227.1	224.8	223.9
17.5°	222.5	222.2	219.3	217.0	215.8
20°	215.0	214.4	211.5	207.8	205.7
22.5°	206.6	206.6	203.1	198.2	196.2
25°	198.8	197.7	194.5	187.6	182.4
27.5°	189.9	188.1	184.7	174.9	168.8
30°	180.1	179.2	174.3	161.6	157.0
32.5°	170.8	169.4	164.2	150.9	147.2
35°	161.3	160.1	152.4	140.8	137.4
37.5°	151.8	150.3	140.5	131.3	127.0
40°	142.3	140.5	129.8	121.5	116.9
42.5°	133.3	131.0	120.6	111.7	106.5
45°	123.8	121.2	110.8	101.6	97.5
47.5°	114.3	112.0	102.4	92.9	88.3
50°	104.2	102.1	93.5	84.0	79.1
52.5°	95.8	92.6	84.3	74.7	70.7
55°	86.0	83.4	75.6	66.7	63.2
57.5°	77.0	74.4	67.2	58.9	56.0
60°	68.7	64.9	58.9	51.7	49.3
62.5°	59.4	56.6	51.4	45.3	48.2
65°	51.1	48.2	43.6	44.4	36.9
67.5°	41.8	40.4	36.4	32.3	31.2
70°	34.0	32.3	30.9	26.5	25.4
72.5°	27.1	25.4	23.4	21.1	20.2
75°	20.5	19.0	17.9	17.0	18.8
77.5°	14.1	13.6	12.7	11.8	11.5
80°	9.2	8.9	8.7	8.4	8.1
82.5°	5.5	5.5	5.5	5.5	5.5
85°	2.9	3.2	3.5	3.8	4.0
87.5°	1.7	1.7	2.0	2.3	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)