

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: P558760

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558760
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-93-88-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 422.0 lumens
Efficiency: N/A
Efficacy: 72.8 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

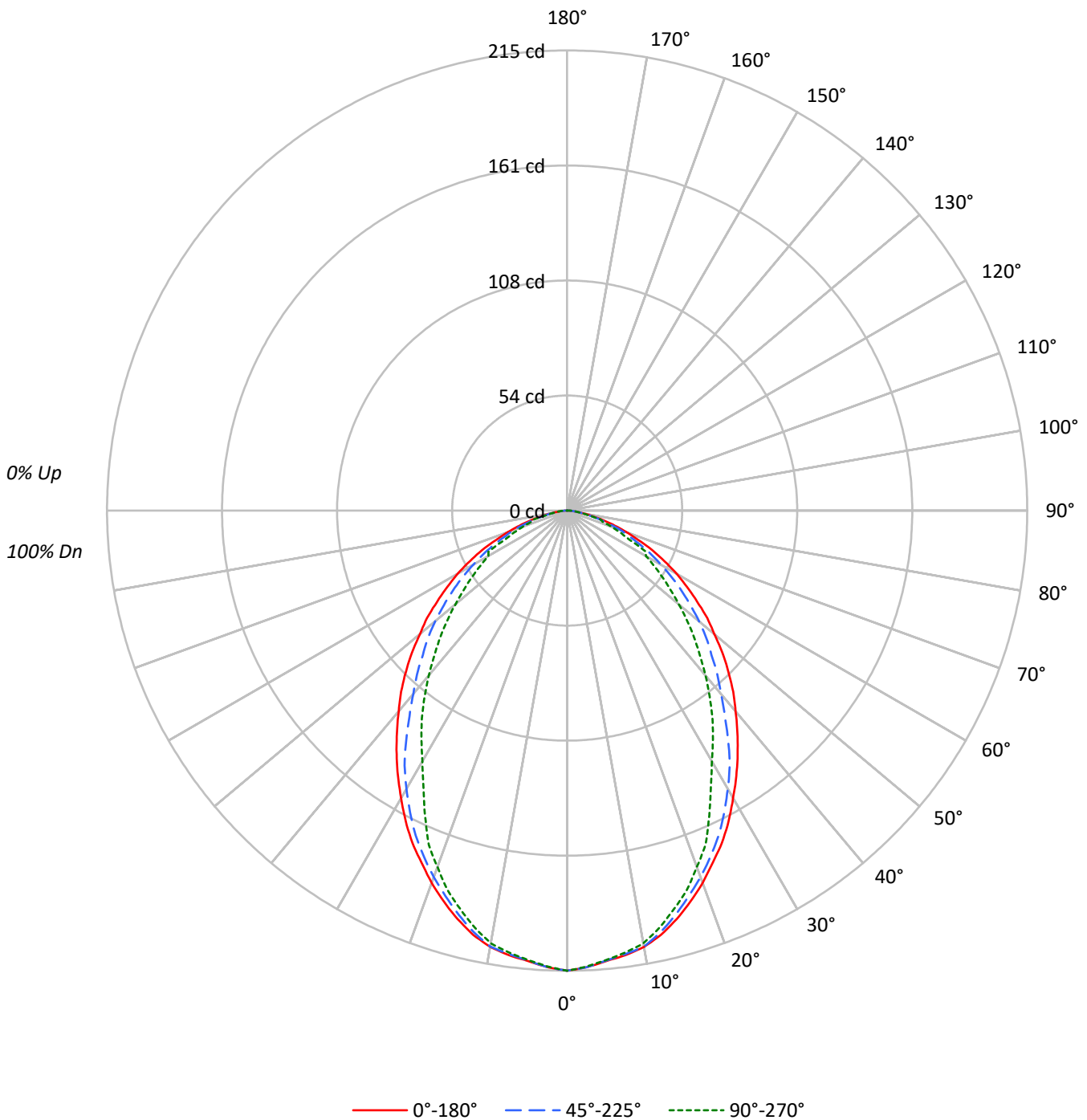
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2314	2314	2314
5°	2282	2280	2277
10°	2263	2260	2244
15°	2202	2180	2148
20°	2120	2087	2030
25°	2033	1989	1866
30°	1928	1866	1680
35°	1825	1724	1554
40°	1721	1571	1414
45°	1623	1452	1279
50°	1502	1348	1140
55°	1391	1222	1021
60°	1272	1091	915
65°	1121	955	810
70°	922	837	689
75°	732	640	674
80°	496	465	434
85°	309	371	432

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1623 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.0	4.7
10°-20°	54.9	13.0
20°-30°	76.0	18.0
30°-40°	81.1	19.2
40°-50°	74.0	17.5
50°-60°	57.9	13.7
60°-70°	37.8	8.9
70°-80°	16.7	4.0
80°-90°	3.6	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°	151.0	35.8
0°-40°	232.0	55.0
0°-60°	363.9	86.2
0°-90°	422.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	422.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	215	215	215	215	215	
5°	211	211	211	211	211	20
15°	198	198	196	194	193	56
25°	171	170	168	162	157	79
35°	139	138	131	121	118	87
45°	107	104	95	88	84	82
55°	74	72	65	57	54	66
65°	44	42	38	38	32	43
75°	18	16	15	15	16	19
85°	2	3	3	3	4	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	215.0	215.0	215.0	215.0	215.0
2.5°	213.5	213.5	213.5	213.2	213.2
5°	211.2	211.0	211.0	210.7	210.7
7.5°	209.5	209.2	209.0	208.7	208.3
10°	207.0	207.0	206.8	205.5	205.3
12.5°	203.0	202.8	201.8	200.1	199.6
15°	197.6	197.6	195.6	193.6	192.8
17.5°	191.6	191.4	188.9	186.9	185.9
20°	185.1	184.6	182.2	178.9	177.2
22.5°	177.9	177.9	175.0	170.7	169.0
25°	171.2	170.2	167.5	161.5	157.1
27.5°	163.5	162.0	159.0	150.6	145.4
30°	155.1	154.3	150.1	139.2	135.2
32.5°	147.1	145.9	141.4	130.0	126.7
35°	138.9	137.9	131.2	121.3	118.3
37.5°	130.7	129.5	121.0	113.1	109.3
40°	122.5	121.0	111.8	104.6	100.6
42.5°	114.8	112.8	103.9	96.2	91.7
45°	106.6	104.4	95.4	87.5	84.0
47.5°	98.4	96.4	88.2	80.0	76.0
50°	89.7	88.0	80.5	72.3	68.1
52.5°	82.5	79.8	72.6	64.4	60.9
55°	74.1	71.8	65.1	57.4	54.4
57.5°	66.4	64.1	57.9	50.7	48.2
60°	59.1	55.9	50.7	44.5	42.5
62.5°	51.2	48.7	44.2	39.0	41.5
65°	44.0	41.5	37.5	38.3	31.8
67.5°	36.0	34.8	31.3	27.8	26.8
70°	29.3	27.8	26.6	22.9	21.9
72.5°	23.4	21.9	20.1	18.1	17.4
75°	17.6	16.4	15.4	14.7	16.2
77.5°	12.2	11.7	10.9	10.2	9.9
80°	8.0	7.7	7.5	7.2	7.0
82.5°	4.7	4.7	4.7	4.7	4.7
85°	2.5	2.7	3.0	3.2	3.5
87.5°	1.5	1.5	1.7	2.0	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)