

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: P558738

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558738
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-82-85-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 455.0 lumens
Efficiency: N/A
Efficacy: 78.4 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

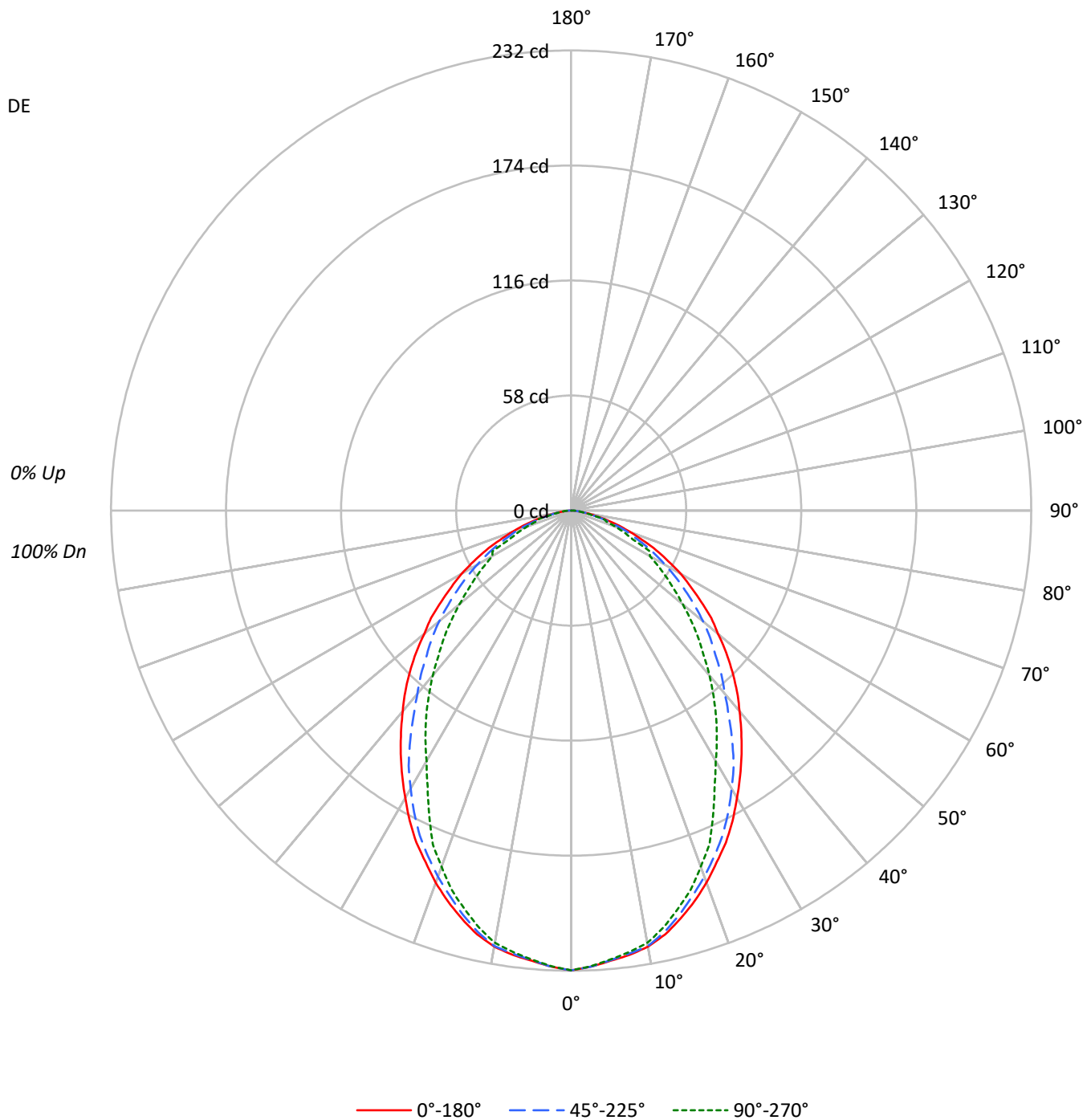
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	47	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°	2495	2495	2495
5°	2461	2458	2455
10°	2440	2436	2419
15°	2374	2350	2317
20°	2286	2250	2188
25°	2192	2145	2011
30°	2078	2011	1812
35°	1968	1859	1675
40°	1856	1695	1525
45°	1749	1566	1379
50°	1619	1454	1229
55°	1498	1317	1102
60°	1373	1178	986
65°	1207	1032	874
70°	995	903	743
75°	790	690	724
80°	533	496	465
85°	333	395	469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1749 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.6	4.7
10°-20°	59.2	13.0
20°-30°	82.0	18.0
30°-40°	87.4	19.2
40°-50°	79.7	17.5
50°-60°	62.5	13.7
60°-70°	40.7	8.9
70°-80°	18.0	4.0
80°-90°	3.9	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°	162.8	35.8
0°-40°	250.2	55.0
0°-60°	392.4	86.2
0°-90°	455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	455.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	232	232	232	232	232	
5°	228	228	228	227	227	22
15°	213	213	211	209	208	60
25°	185	184	181	174	169	85
35°	150	149	142	131	128	94
45°	115	112	103	94	91	89
55°	80	77	70	62	59	72
65°	47	45	40	41	34	47
75°	19	18	17	16	17	20
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	231.8	231.8	231.8	231.8	231.8
2.5°	230.2	230.2	230.2	229.9	229.9
5°	227.8	227.5	227.5	227.2	227.2
7.5°	225.9	225.6	225.3	225.1	224.5
10°	223.2	223.2	222.9	221.6	221.3
12.5°	218.9	218.6	217.6	215.7	215.2
15°	213.0	213.0	210.9	208.7	207.9
17.5°	206.6	206.3	203.6	201.5	200.4
20°	199.6	199.1	196.4	192.9	191.0
22.5°	191.8	191.8	188.6	184.1	182.2
25°	184.6	183.5	180.6	174.2	169.3
27.5°	176.3	174.7	171.5	162.4	156.7
30°	167.2	166.4	161.8	150.0	145.8
32.5°	158.6	157.3	152.5	140.1	136.7
35°	149.8	148.7	141.5	130.8	127.5
37.5°	140.9	139.6	130.5	121.9	117.9
40°	132.1	130.5	120.6	112.8	108.5
42.5°	123.8	121.6	112.0	103.7	98.9
45°	114.9	112.5	102.9	94.3	90.6
47.5°	106.1	104.0	95.1	86.3	82.0
50°	96.7	94.9	86.8	78.0	73.4
52.5°	89.0	86.0	78.2	69.4	65.6
55°	79.8	77.4	70.2	61.9	58.7
57.5°	71.5	69.1	62.4	54.7	52.0
60°	63.8	60.3	54.7	48.0	45.8
62.5°	55.2	52.5	47.7	42.1	44.7
65°	47.4	44.7	40.5	41.3	34.3
67.5°	38.9	37.5	33.8	30.0	28.9
70°	31.6	30.0	28.7	24.7	23.6
72.5°	25.2	23.6	21.7	19.6	18.8
75°	19.0	17.7	16.6	15.8	17.4
77.5°	13.1	12.6	11.8	11.0	10.7
80°	8.6	8.3	8.0	7.8	7.5
82.5°	5.1	5.1	5.1	5.1	5.1
85°	2.7	2.9	3.2	3.5	3.8
87.5°	1.6	1.6	1.9	2.1	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)