

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: P558742

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558742
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-82-87-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 435.0 lumens
Efficiency: N/A
Efficacy: 75.0 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

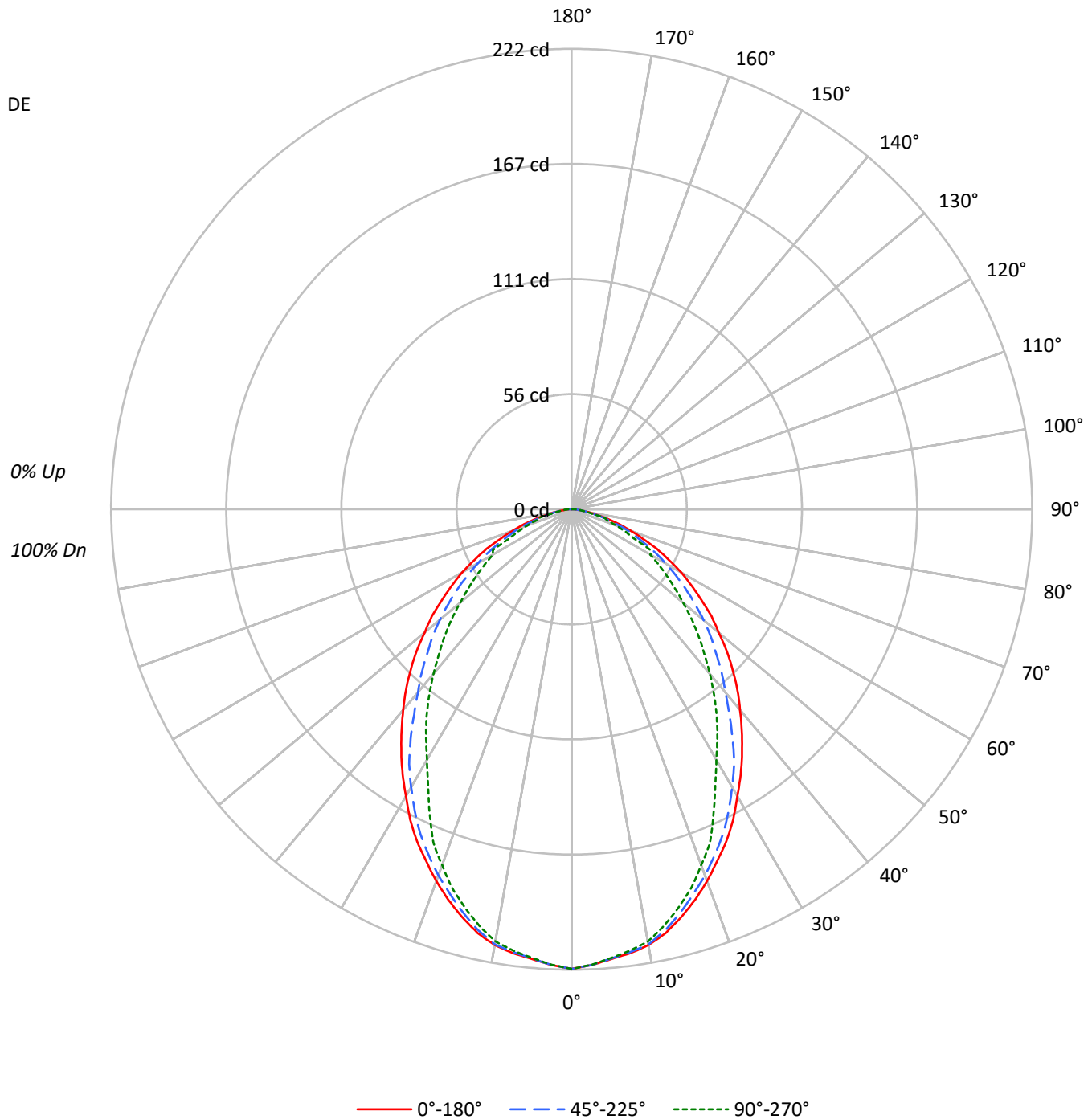
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2385	2385	2385
5°	2352	2350	2347
10°	2332	2329	2313
15°	2270	2247	2215
20°	2186	2151	2092
25°	2096	2051	1923
30°	1986	1923	1733
35°	1882	1778	1602
40°	1775	1620	1457
45°	1673	1498	1318
50°	1549	1390	1176
55°	1432	1259	1053
60°	1313	1126	943
65°	1154	986	835
70°	950	862	708
75°	757	661	695
80°	508	477	446
85°	321	383	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1673 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.6	4.7
10°-20°	56.6	13.0
20°-30°	78.4	18.0
30°-40°	83.6	19.2
40°-50°	76.2	17.5
50°-60°	59.7	13.7
60°-70°	38.9	8.9
70°-80°	17.2	4.0
80°-90°	3.7	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°	155.6	35.8
0°-40°	239.2	55.0
0°-60°	375.1	86.2
0°-90°	435.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	435.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	222	222	222	222	222	
5°	218	218	218	217	217	21
15°	204	204	202	200	199	57
25°	176	176	173	166	162	81
35°	143	142	135	125	122	90
45°	110	108	98	90	87	85
55°	76	74	67	59	56	68
65°	45	43	39	39	33	45
75°	18	17	16	15	17	20
85°	3	3	3	3	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	221.6	221.6	221.6	221.6	221.6
2.5°	220.0	220.0	220.0	219.8	219.8
5°	217.7	217.5	217.5	217.2	217.2
7.5°	215.9	215.7	215.4	215.2	214.7
10°	213.4	213.4	213.1	211.8	211.6
12.5°	209.3	209.0	208.0	206.2	205.7
15°	203.7	203.7	201.6	199.6	198.8
17.5°	197.5	197.2	194.7	192.6	191.6
20°	190.8	190.3	187.8	184.4	182.6
22.5°	183.4	183.4	180.3	176.0	174.2
25°	176.5	175.5	172.7	166.5	161.9
27.5°	168.6	167.0	163.9	155.2	149.9
30°	159.8	159.1	154.7	143.5	139.4
32.5°	151.6	150.4	145.8	134.0	130.6
35°	143.2	142.2	135.3	125.0	121.9
37.5°	134.7	133.5	124.8	116.6	112.7
40°	126.3	124.8	115.3	107.8	103.7
42.5°	118.3	116.3	107.1	99.1	94.5
45°	109.9	107.6	98.4	90.2	86.6
47.5°	101.4	99.4	90.9	82.5	78.4
50°	92.5	90.7	83.0	74.5	70.2
52.5°	85.0	82.2	74.8	66.3	62.8
55°	76.3	74.0	67.1	59.2	56.1
57.5°	68.4	66.1	59.7	52.3	49.7
60°	61.0	57.6	52.3	45.9	43.8
62.5°	52.8	50.2	45.6	40.2	42.8
65°	45.3	42.8	38.7	39.4	32.8
67.5°	37.1	35.9	32.3	28.7	27.7
70°	30.2	28.7	27.4	23.6	22.5
72.5°	24.1	22.5	20.7	18.7	17.9
75°	18.2	16.9	15.9	15.1	16.7
77.5°	12.6	12.0	11.3	10.5	10.2
80°	8.2	7.9	7.7	7.4	7.2
82.5°	4.9	4.9	4.9	4.9	4.9
85°	2.6	2.8	3.1	3.3	3.6
87.5°	1.5	1.5	1.8	2.0	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)