

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: P558921

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558921
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-LD4-1STD-40-UNV-81-88-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 637.0 lumens
Efficiency: N/A
Efficacy: 76.7 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

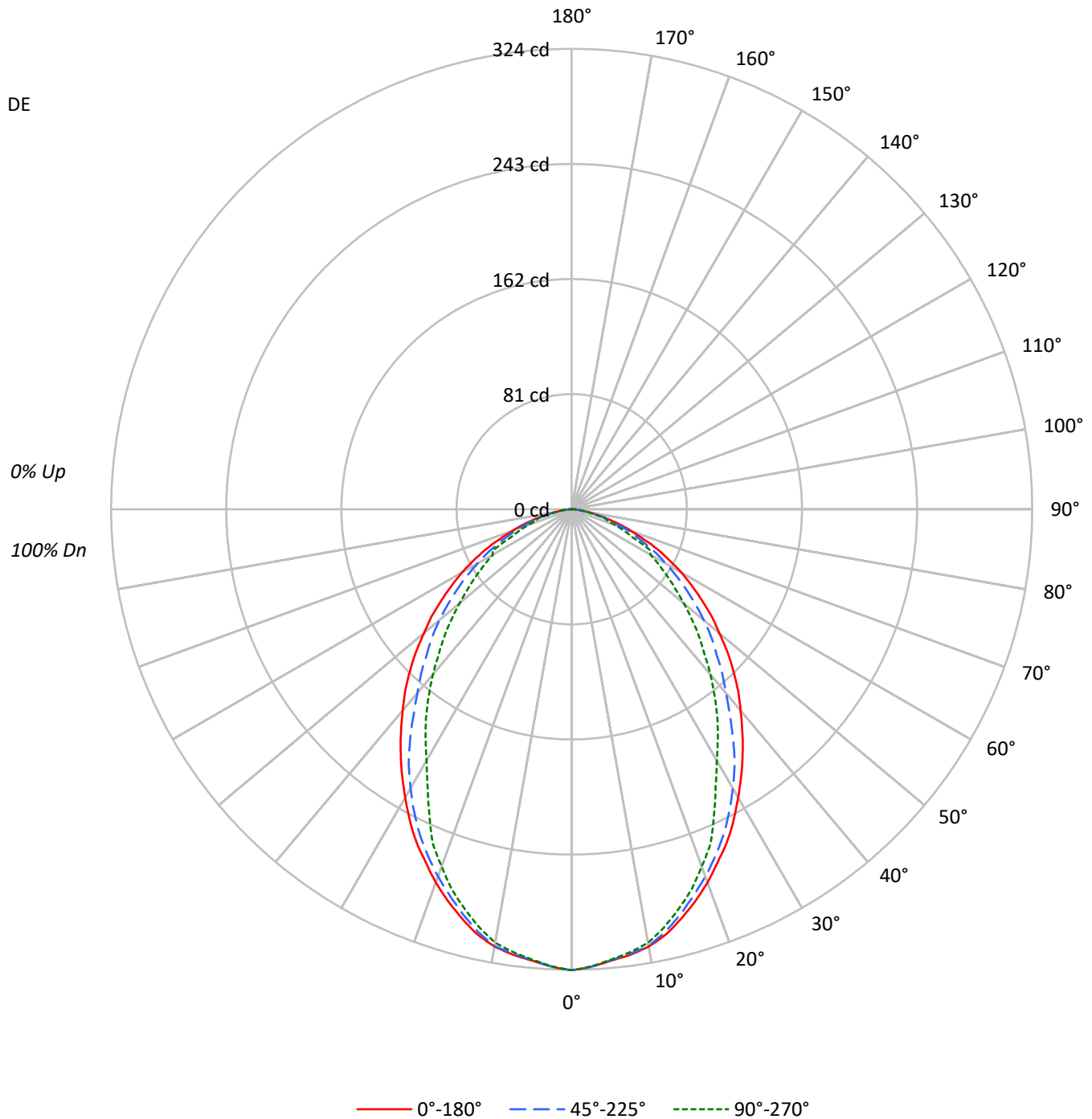
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3493	3493	3493
5°	3446	3441	3437
10°	3416	3411	3386
15°	3323	3290	3244
20°	3202	3150	3064
25°	3070	3002	2816
30°	2910	2816	2537
35°	2756	2603	2347
40°	2598	2372	2134
45°	2449	2192	1930
50°	2267	2035	1721
55°	2098	1845	1543
60°	1922	1647	1380
65°	1691	1442	1223
70°	1394	1262	1039
75°	1106	969	1015
80°	744	700	651
85°	469	556	655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2449 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.2	4.7
10°-20°	82.9	13.0
20°-30°	114.8	18.0
30°-40°	122.4	19.2
40°-50°	111.6	17.5
50°-60°	87.5	13.7
60°-70°	57.0	8.9
70°-80°	25.3	4.0
80°-90°	5.4	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°	227.9	35.8
0°-40°	350.2	55.0
0°-60°	549.3	86.2
0°-90°	637.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	637.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	324	324	324	324	324	
5°	319	318	318	318	318	30
15°	298	298	295	292	291	84
25°	258	257	253	244	237	119
35°	210	208	198	183	179	131
45°	161	158	144	132	127	124
55°	112	108	98	87	82	100
65°	66	63	57	58	48	65
75°	27	25	23	22	24	29
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	324.5	324.5	324.5	324.5	324.5
2.5°	322.2	322.2	322.2	321.9	321.9
5°	318.9	318.5	318.5	318.1	318.1
7.5°	316.2	315.9	315.5	315.1	314.4
10°	312.5	312.5	312.1	310.2	309.8
12.5°	306.5	306.1	304.6	302.0	301.2
15°	298.2	298.2	295.2	292.2	291.1
17.5°	289.2	288.8	285.1	282.1	280.6
20°	279.5	278.7	275.0	270.1	267.5
22.5°	268.6	268.6	264.1	257.7	255.1
25°	258.5	257.0	252.8	243.8	237.1
27.5°	246.8	244.6	240.1	227.3	219.4
30°	234.1	232.9	226.6	210.1	204.1
32.5°	222.1	220.2	213.4	196.2	191.3
35°	209.7	208.2	198.1	183.1	178.6
37.5°	197.3	195.4	182.7	170.7	165.1
40°	184.9	182.7	168.8	157.9	151.9
42.5°	173.3	170.3	156.8	145.2	138.4
45°	160.9	157.6	144.0	132.0	126.8
47.5°	148.5	145.5	133.2	120.8	114.8
50°	135.4	132.8	121.5	109.2	102.8
52.5°	124.5	120.4	109.5	97.2	91.9
55°	111.8	108.4	98.3	86.7	82.2
57.5°	100.2	96.8	87.4	76.5	72.8
60°	89.3	84.4	76.5	67.1	64.1
62.5°	77.3	73.5	66.8	58.9	62.6
65°	66.4	62.6	56.6	57.8	48.0
67.5°	54.4	52.5	47.3	42.0	40.5
70°	44.3	42.0	40.1	34.5	33.0
72.5°	35.3	33.0	30.4	27.4	26.3
75°	26.6	24.8	23.3	22.1	24.4
77.5°	18.4	17.6	16.5	15.4	15.0
80°	12.0	11.6	11.3	10.9	10.5
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.8	4.1	4.5	4.9	5.3
87.5°	2.3	2.3	2.6	3.0	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)