

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: P558942

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-82-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558942
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-82-97-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 606.0 lumens
Efficiency: N/A
Efficacy: 73.0 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

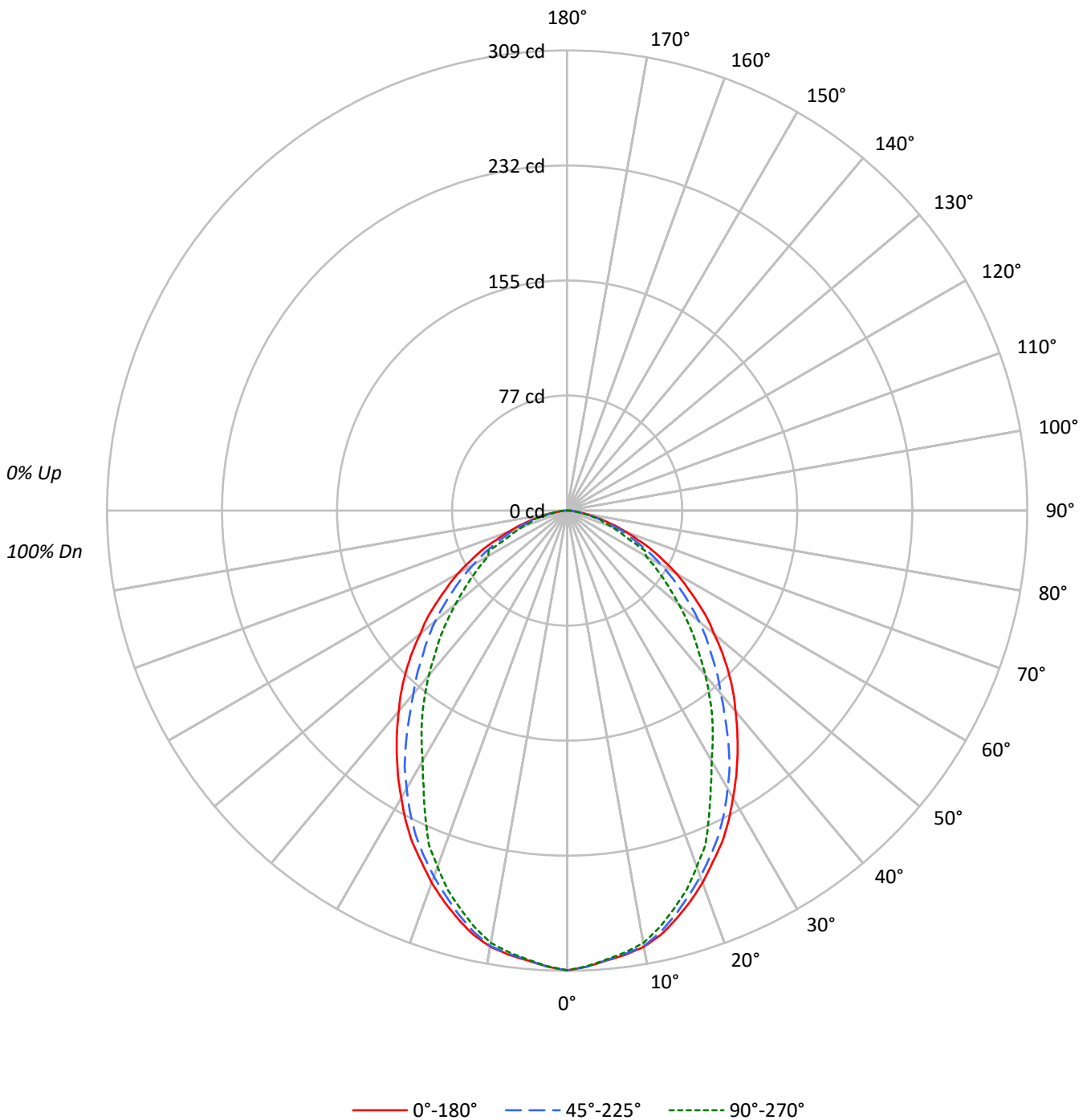
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3323	3323	3323
5°	3277	3274	3270
10°	3249	3245	3222
15°	3161	3130	3086
20°	3046	2997	2914
25°	2920	2856	2678
30°	2768	2678	2412
35°	2621	2476	2233
40°	2472	2257	2030
45°	2331	2085	1836
50°	2157	1936	1638
55°	1995	1755	1468
60°	1828	1567	1313
65°	1610	1373	1164
70°	1325	1202	988
75°	1052	919	965
80°	707	663	620
85°	445	531	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2331 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.7	4.7
10°-20°	78.9	13.0
20°-30°	109.2	18.0
30°-40°	116.4	19.2
40°-50°	106.2	17.5
50°-60°	83.2	13.7
60°-70°	54.2	8.9
70°-80°	24.0	4.0
80°-90°	5.2	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°	216.8	35.8
0°-40°	333.2	55.0
0°-60°	522.6	86.2
0°-90°	606.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	606.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	309	309	309	309	309	
5°	303	303	303	303	303	29
15°	284	284	281	278	277	80
25°	246	244	240	232	226	113
35°	200	198	188	174	170	125
45°	153	150	137	126	121	118
55°	106	103	94	82	78	95
65°	63	60	54	55	46	62
75°	25	24	22	21	23	27
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°	308.7	308.7	308.7	308.7	308.7
2.5°	306.5	306.5	306.5	306.2	306.2
5°	303.3	303.0	303.0	302.6	302.6
7.5°	300.8	300.5	300.1	299.8	299.1
10°	297.3	297.3	296.9	295.1	294.8
12.5°	291.6	291.2	289.8	287.3	286.6
15°	283.7	283.7	280.9	278.0	276.9
17.5°	275.1	274.8	271.2	268.4	266.9
20°	265.9	265.2	261.6	256.9	254.4
22.5°	255.5	255.5	251.2	245.2	242.7
25°	245.9	244.5	240.5	232.0	225.5
27.5°	234.8	232.7	228.4	216.3	208.8
30°	222.7	221.6	215.5	199.8	194.1
32.5°	211.3	209.5	203.1	186.6	182.0
35°	199.5	198.1	188.4	174.2	169.9
37.5°	187.7	185.9	173.8	162.4	157.0
40°	175.9	173.8	160.6	150.2	144.5
42.5°	164.9	162.0	149.2	138.1	131.7
45°	153.1	149.9	137.0	125.6	120.6
47.5°	141.3	138.5	126.7	114.9	109.2
50°	128.8	126.3	115.6	103.8	97.8
52.5°	118.5	114.6	104.2	92.4	87.4
55°	106.3	103.1	93.5	82.4	78.2
57.5°	95.3	92.1	83.1	72.8	69.2
60°	84.9	80.3	72.8	63.9	61.0
62.5°	73.5	69.9	63.5	56.0	59.6
65°	63.2	59.6	53.9	55.0	45.7
67.5°	51.7	50.0	45.0	40.0	38.5
70°	42.1	40.0	38.2	32.8	31.4
72.5°	33.5	31.4	28.9	26.1	25.0
75°	25.3	23.6	22.1	21.1	23.2
77.5°	17.5	16.8	15.7	14.6	14.3
80°	11.4	11.1	10.7	10.3	10.0
82.5°	6.8	6.8	6.8	6.8	6.8
85°	3.6	3.9	4.3	4.6	5.0
87.5°	2.1	2.1	2.5	2.9	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)