

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: P559023

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559023
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-50-UNV-93-97-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 774.0 lumens
Efficiency: N/A
Efficacy: 93.3 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

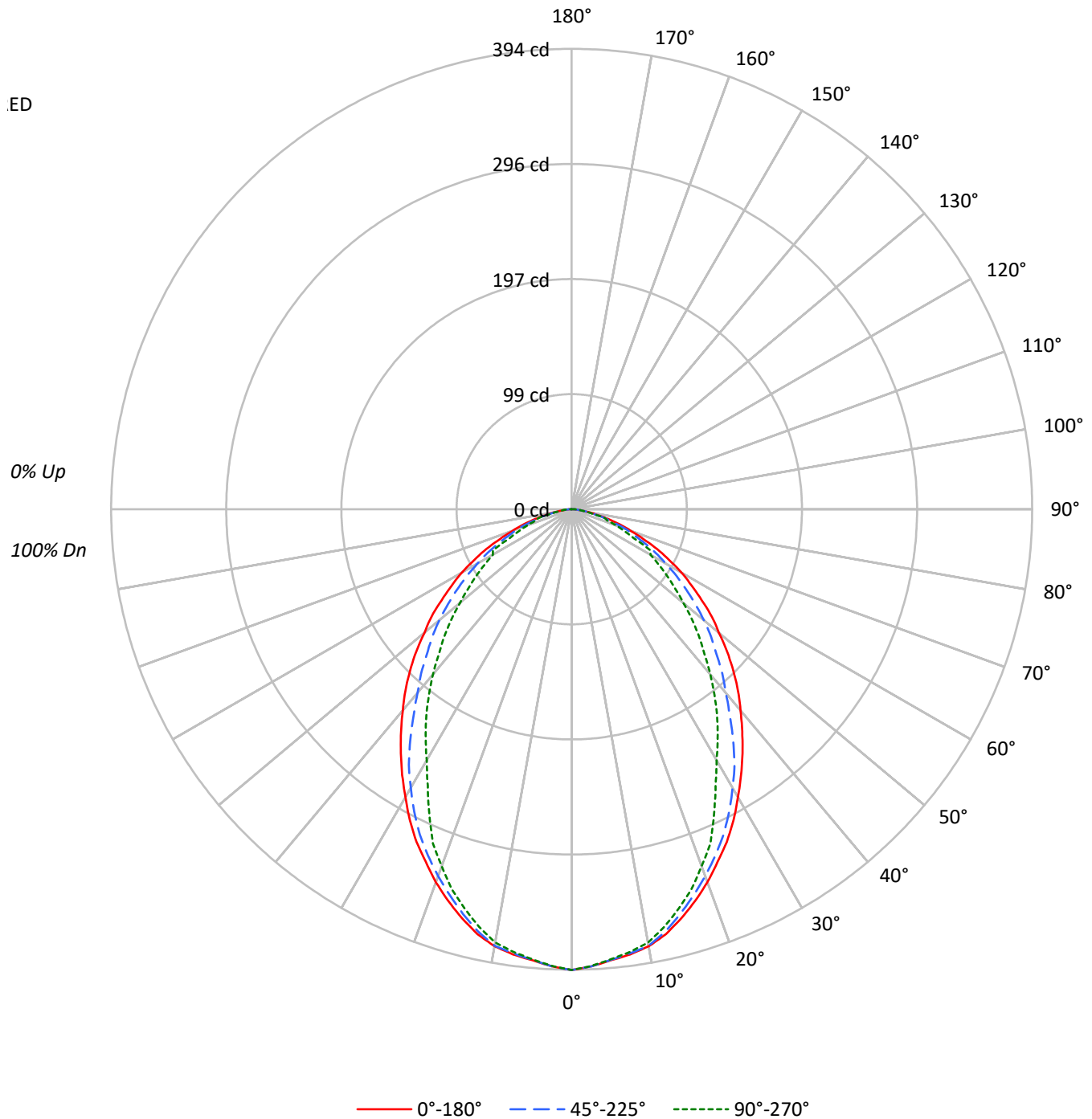
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P559023

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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°	4244	4244	4244
5°	4186	4182	4176
10°	4150	4145	4115
15°	4038	3997	3942
20°	3890	3827	3723
25°	3729	3649	3422
30°	3535	3422	3082
35°	3348	3163	2851
40°	3157	2882	2594
45°	2976	2664	2346
50°	2755	2473	2092
55°	2548	2241	1873
60°	2336	2002	1677
65°	2055	1752	1485
70°	1693	1536	1262
75°	1347	1177	1231
80°	905	849	793
85°	568	679	790

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2976 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.7	4.7
10°-20°	100.7	13.0
20°-30°	139.4	18.0
30°-40°	148.7	19.2
40°-50°	135.6	17.5
50°-60°	106.3	13.7
60°-70°	69.2	8.9
70°-80°	30.7	4.0
80°-90°	6.6	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°	276.9	35.8
0°-40°	425.6	55.0
0°-60°	667.5	86.2
0°-90°	774.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	774.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	394	394	394	394	394	
5°	387	387	387	386	386	37
15°	362	362	359	355	354	102
25°	314	312	307	296	288	144
35°	255	253	241	222	217	159
45°	196	191	175	160	154	151
55°	136	132	119	105	100	122
65°	81	76	69	70	58	80
75°	32	30	28	27	30	35
85°	5	5	6	6	6	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	394.3	394.3	394.3	394.3	394.3
2.5°	391.5	391.5	391.5	391.1	391.1
5°	387.4	387.0	387.0	386.5	386.5
7.5°	384.2	383.8	383.3	382.9	382.0
10°	379.7	379.7	379.2	376.9	376.5
12.5°	372.4	371.9	370.1	366.9	366.0
15°	362.4	362.4	358.7	355.1	353.7
17.5°	351.4	351.0	346.4	342.8	340.9
20°	339.6	338.7	334.1	328.2	325.0
22.5°	326.4	326.4	320.9	313.1	309.9
25°	314.0	312.2	307.2	296.3	288.1
27.5°	299.9	297.2	291.7	276.2	266.6
30°	284.4	283.1	275.3	255.2	248.0
32.5°	269.8	267.6	259.3	238.4	232.5
35°	254.8	253.0	240.7	222.4	217.0
37.5°	239.7	237.5	222.0	207.4	200.6
40°	224.7	222.0	205.1	191.9	184.6
42.5°	210.6	206.9	190.5	176.4	168.2
45°	195.5	191.4	175.0	160.4	154.1
47.5°	180.5	176.8	161.8	146.8	139.5
50°	164.5	161.4	147.7	132.6	124.9
52.5°	151.3	146.3	133.1	118.1	111.7
55°	135.8	131.7	119.4	105.3	99.8
57.5°	121.7	117.6	106.2	93.0	88.4
60°	108.5	102.6	93.0	81.6	77.9
62.5°	93.9	89.3	81.1	71.6	76.1
65°	80.7	76.1	68.8	70.2	58.3
67.5°	66.1	63.8	57.4	51.0	49.2
70°	53.8	51.0	48.8	41.9	40.1
72.5°	42.8	40.1	36.9	33.3	31.9
75°	32.4	30.1	28.3	26.9	29.6
77.5°	22.3	21.4	20.1	18.7	18.2
80°	14.6	14.1	13.7	13.2	12.8
82.5°	8.7	8.7	8.7	8.7	8.7
85°	4.6	5.0	5.5	5.9	6.4
87.5°	2.7	2.7	3.2	3.6	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)