

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: P559311

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559311
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-LD4-2LO-40-UNV-81-97-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1078.0 lumens
Efficiency: N/A
Efficacy: 92.1 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

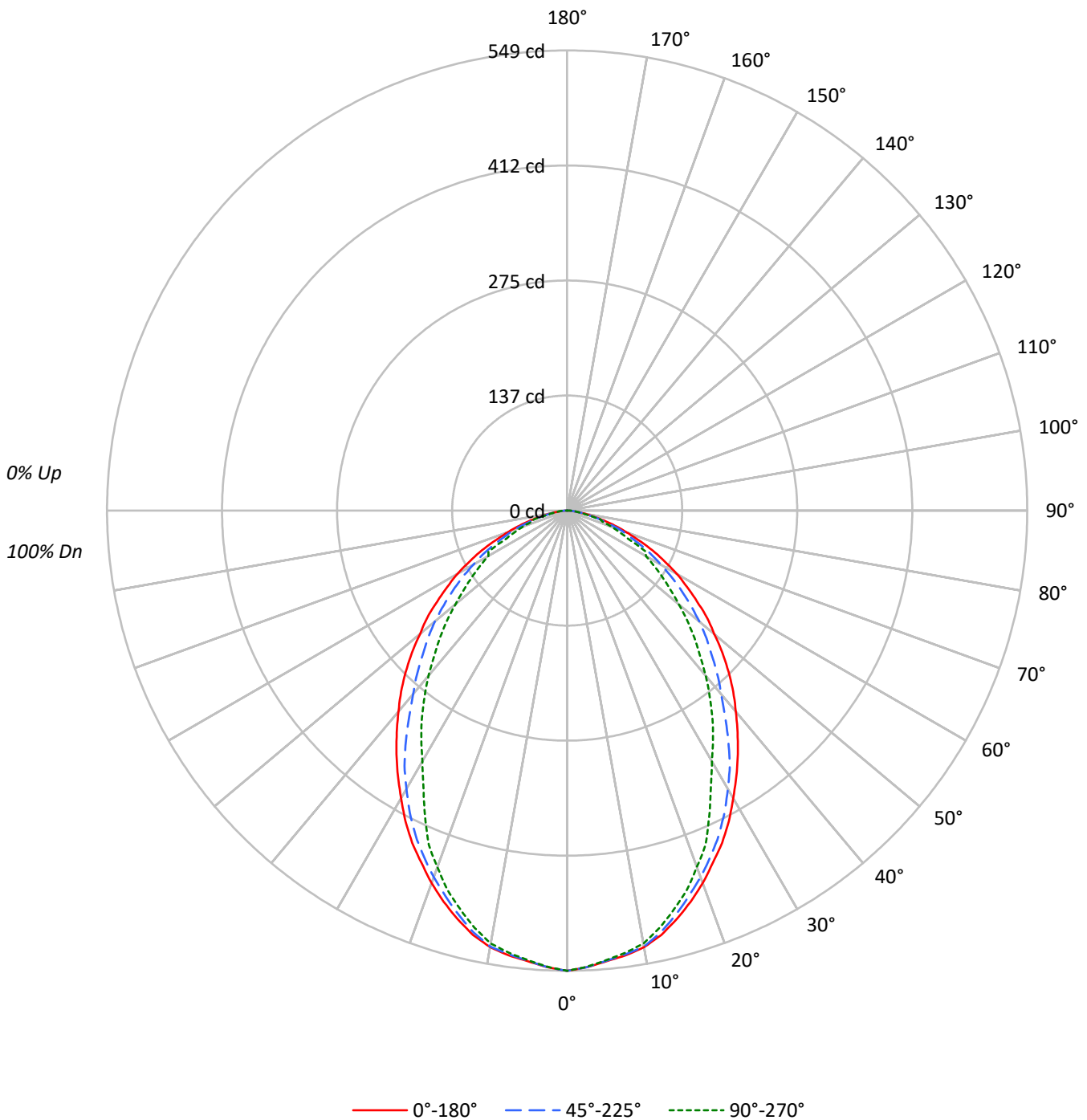
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P559311

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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°	5910	5910	5910
5°	5830	5824	5816
10°	5780	5773	5732
15°	5624	5567	5489
20°	5417	5330	5184
25°	5195	5082	4765
30°	4923	4765	4292
35°	4663	4405	3971
40°	4398	4014	3613
45°	4145	3711	3267
50°	3838	3445	2912
55°	3551	3121	2609
60°	3253	2788	2338
65°	2863	2443	2071
70°	2357	2137	1759
75°	1876	1639	1718
80°	1258	1178	1103
85°	778	939	1099

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4145 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.1	4.7
10°-20°	140.3	13.0
20°-30°	194.2	18.0
30°-40°	207.1	19.2
40°-50°	188.9	17.5
50°-60°	148.0	13.7
60°-70°	96.5	8.9
70°-80°	42.7	4.0
80°-90°	9.2	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°	385.6	35.8
0°-40°	592.7	55.0
0°-60°	929.6	86.2
0°-90°	1078.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1078.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	549	549	549	549	549	
5°	540	539	539	538	538	51
15°	505	505	500	494	493	142
25°	437	435	428	413	401	201
35°	355	352	335	310	302	222
45°	272	267	244	224	215	210
55°	189	184	166	147	139	170
65°	112	106	96	98	81	111
75°	45	42	39	38	41	48
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	549.1	549.1	549.1	549.1	549.1
2.5°	545.3	545.3	545.3	544.7	544.7
5°	539.6	539.0	539.0	538.3	538.3
7.5°	535.2	534.5	533.9	533.2	532.0
10°	528.8	528.8	528.2	525.0	524.4
12.5°	518.6	518.0	515.5	511.0	509.8
15°	504.7	504.7	499.6	494.5	492.6
17.5°	489.4	488.8	482.5	477.4	474.8
20°	472.9	471.7	465.3	457.1	452.6
22.5°	454.5	454.5	446.9	436.1	431.7
25°	437.4	434.9	427.9	412.6	401.2
27.5°	417.7	413.9	406.3	384.7	371.4
30°	396.1	394.2	383.4	355.5	345.3
32.5°	375.8	372.6	361.2	332.0	323.8
35°	354.9	352.3	335.2	309.8	302.2
37.5°	333.9	330.7	309.2	288.8	279.3
40°	313.0	309.2	285.7	267.3	257.1
42.5°	293.3	288.2	265.4	245.7	234.2
45°	272.3	266.6	243.8	223.5	214.6
47.5°	251.4	246.3	225.4	204.4	194.3
50°	229.2	224.7	205.7	184.7	173.9
52.5°	210.8	203.8	185.4	164.4	155.5
55°	189.2	183.5	166.3	146.6	139.0
57.5°	169.5	163.8	147.9	129.5	123.2
60°	151.1	142.8	129.5	113.6	108.6
62.5°	130.8	124.4	113.0	99.7	106.0
65°	112.4	106.0	95.9	97.8	81.3
67.5°	92.0	88.9	80.0	71.1	68.6
70°	74.9	71.1	67.9	58.4	55.9
72.5°	59.7	55.9	51.4	46.3	44.4
75°	45.1	41.9	39.4	37.5	41.3
77.5°	31.1	29.8	27.9	26.0	25.4
80°	20.3	19.7	19.0	18.4	17.8
82.5°	12.1	12.1	12.1	12.1	12.1
85°	6.3	7.0	7.6	8.3	8.9
87.5°	3.8	3.8	4.4	5.1	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)