

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: P559133

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559133
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-LD4-2HI-40-UNV-82-96-EDD
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 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: 1797.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

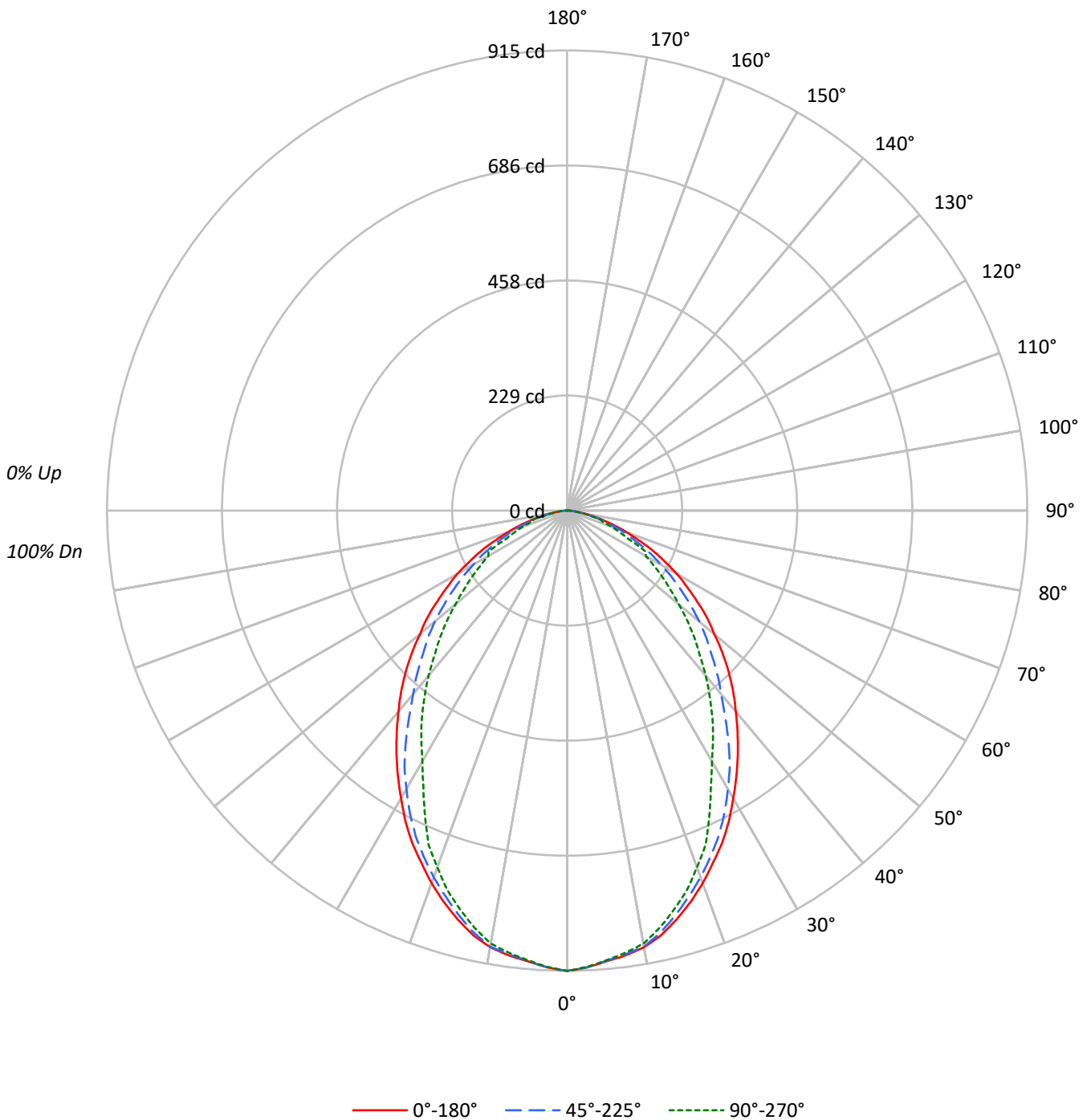
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	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	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	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	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	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	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	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	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	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	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	30	30	30	30	30	30	30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9853	9853	9853
5°	9719	9707	9696
10°	9635	9623	9554
15°	9375	9280	9151
20°	9031	8885	8643
25°	8659	8470	7943
30°	8207	7945	7155
35°	7772	7341	6619
40°	7331	6691	6022
45°	6911	6186	5445
50°	6397	5742	4856
55°	5919	5204	4350
60°	5423	4648	3897
65°	4770	4070	3451
70°	3931	3563	2930
75°	3123	2728	2861
80°	2101	1965	1835
85°	1309	1568	1828

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6911 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	4.7
10°-20°	233.9	13.0
20°-30°	323.7	18.0
30°-40°	345.2	19.2
40°-50°	314.9	17.5
50°-60°	246.7	13.7
60°-70°	160.8	8.9
70°-80°	71.2	4.0
80°-90°	15.3	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°	642.8	35.8
0°-40°	988.0	55.0
0°-60°	1549.7	86.2
0°-90°	1797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1797.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	900	898	898	897	897	85
15°	841	841	833	824	821	237
25°	729	725	713	688	669	335
35°	592	587	559	516	504	370
45°	454	444	406	372	358	350
55°	315	306	277	244	232	283
65°	187	177	160	163	136	185
75°	75	70	66	62	69	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	915.4	915.4	915.4	915.4	915.4
2.5°	909.0	909.0	909.0	908.0	908.0
5°	899.5	898.4	898.4	897.4	897.4
7.5°	892.1	891.0	890.0	888.9	886.8
10°	881.5	881.5	880.4	875.2	874.1
12.5°	864.6	863.5	859.3	851.9	849.8
15°	841.3	841.3	832.8	824.4	821.2
17.5°	815.9	814.8	804.3	795.8	791.6
20°	788.4	786.3	775.7	761.9	754.5
22.5°	757.7	757.7	745.0	727.0	719.6
25°	729.1	724.9	713.2	687.8	668.8
27.5°	696.3	690.0	677.3	641.3	619.1
30°	660.3	657.2	639.2	592.6	575.7
32.5°	626.5	621.2	602.1	553.5	539.7
35°	591.5	587.3	558.7	516.4	503.7
37.5°	556.6	551.3	515.4	481.5	465.6
40°	521.7	515.4	476.2	445.5	428.6
42.5°	488.9	480.4	442.3	409.5	390.5
45°	454.0	444.5	406.4	372.5	357.7
47.5°	419.1	410.6	375.7	340.7	323.8
50°	382.0	374.6	342.9	307.9	290.0
52.5°	351.3	339.7	309.0	274.1	259.3
55°	315.4	305.8	277.3	244.5	231.8
57.5°	282.5	273.0	246.6	215.9	205.3
60°	251.9	238.1	215.9	189.4	181.0
62.5°	218.0	207.4	188.4	166.1	176.7
65°	187.3	176.7	159.8	163.0	135.5
67.5°	153.4	148.2	133.3	118.5	114.3
70°	124.9	118.5	113.2	97.4	93.1
72.5°	99.5	93.1	85.7	77.3	74.1
75°	75.1	69.8	65.6	62.4	68.8
77.5°	51.9	49.7	46.6	43.4	42.3
80°	33.9	32.8	31.7	30.7	29.6
82.5°	20.1	20.1	20.1	20.1	20.1
85°	10.6	11.6	12.7	13.8	14.8
87.5°	6.3	6.3	7.4	8.5	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)