

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: P559693

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559693
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-12-2-LD4-1HI-40-UNV-81-96-EDD
Description: 1X2 FSR TROFFER WITH .156 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: 1779.0 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

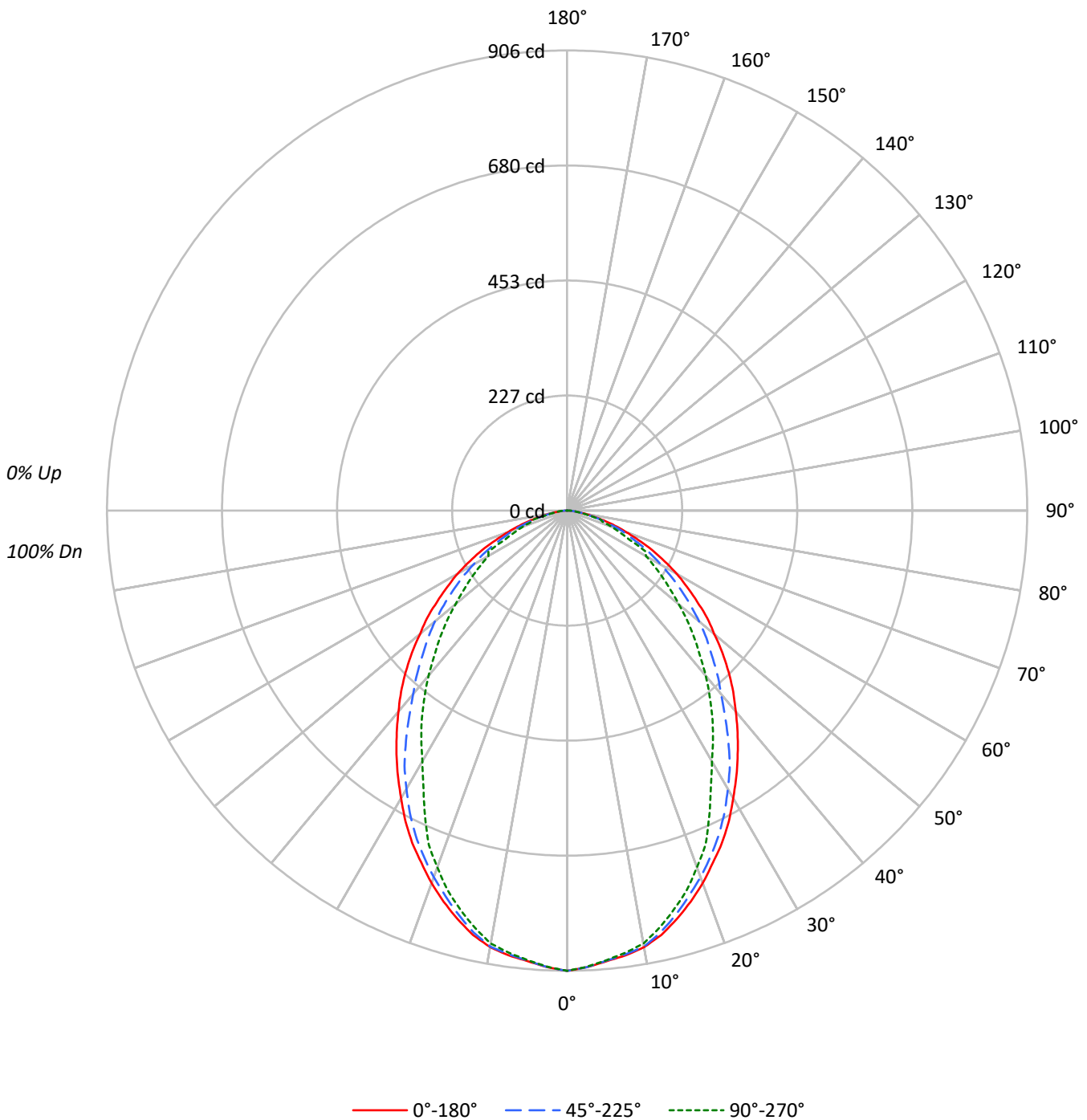
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																
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°	4877	4877	4877
5°	4811	4805	4800
10°	4769	4763	4729
15°	4641	4594	4530
20°	4470	4398	4278
25°	4286	4193	3932
30°	4062	3933	3542
35°	3847	3634	3277
40°	3629	3312	2981
45°	3420	3062	2695
50°	3167	2842	2404
55°	2929	2576	2152
60°	2683	2300	1928
65°	2361	2015	1708
70°	1945	1764	1451
75°	1547	1352	1416
80°	1038	973	908
85°	648	778	908

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3420 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	4.7
10°-20°	231.5	13.0
20°-30°	320.5	18.0
30°-40°	341.8	19.2
40°-50°	311.8	17.5
50°-60°	244.2	13.7
60°-70°	159.2	8.9
70°-80°	70.5	4.0
80°-90°	15.1	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°	636.4	35.8
0°-40°	978.1	55.0
0°-60°	1534.1	86.2
0°-90°	1779.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1779.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	890	889	889	888	888	85
15°	833	833	824	816	813	234
25°	722	718	706	681	662	331
35°	586	581	553	511	499	366
45°	449	440	402	369	354	346
55°	312	303	274	242	229	280
65°	185	175	158	161	134	183
75°	74	69	65	62	68	80
85°	10	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°	906.2	906.2	906.2	906.2	906.2
2.5°	899.9	899.9	899.9	898.9	898.9
5°	890.5	889.4	889.4	888.4	888.4
7.5°	883.2	882.1	881.1	880.0	877.9
10°	872.7	872.7	871.6	866.4	865.3
12.5°	855.9	854.9	850.7	843.3	841.2
15°	832.9	832.9	824.5	816.1	813.0
17.5°	807.7	806.7	796.2	787.8	783.6
20°	780.5	778.4	767.9	754.3	747.0
22.5°	750.1	750.1	737.5	719.7	712.4
25°	721.8	717.6	706.1	681.0	662.1
27.5°	689.3	683.1	670.5	634.9	612.9
30°	653.7	650.6	632.8	586.7	569.9
32.5°	620.2	615.0	596.1	547.9	534.3
35°	585.6	581.4	553.1	511.2	498.7
37.5°	551.1	545.8	510.2	476.7	461.0
40°	516.5	510.2	471.4	441.1	424.3
42.5°	484.0	475.6	437.9	405.4	386.6
45°	449.4	440.0	402.3	368.8	354.1
47.5°	414.9	406.5	371.9	337.3	320.6
50°	378.2	370.9	339.4	304.9	287.1
52.5°	347.8	336.3	305.9	271.3	256.7
55°	312.2	302.8	274.5	242.0	229.4
57.5°	279.7	270.3	244.1	213.7	203.2
60°	249.3	235.7	213.7	187.5	179.1
62.5°	215.8	205.3	186.5	164.5	175.0
65°	185.4	175.0	158.2	161.3	134.1
67.5°	151.9	146.7	132.0	117.3	113.1
70°	123.6	117.3	112.1	96.4	92.2
72.5°	98.5	92.2	84.9	76.5	73.3
75°	74.4	69.1	65.0	61.8	68.1
77.5°	51.3	49.2	46.1	43.0	41.9
80°	33.5	32.5	31.4	30.4	29.3
82.5°	19.9	19.9	19.9	19.9	19.9
85°	10.5	11.5	12.6	13.6	14.7
87.5°	6.3	6.3	7.3	8.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)