

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: P559523

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559523
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-LD4-2STD-40-UNV-93-85-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1561.0 lumens
Efficiency: N/A
Efficacy: 94.0 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

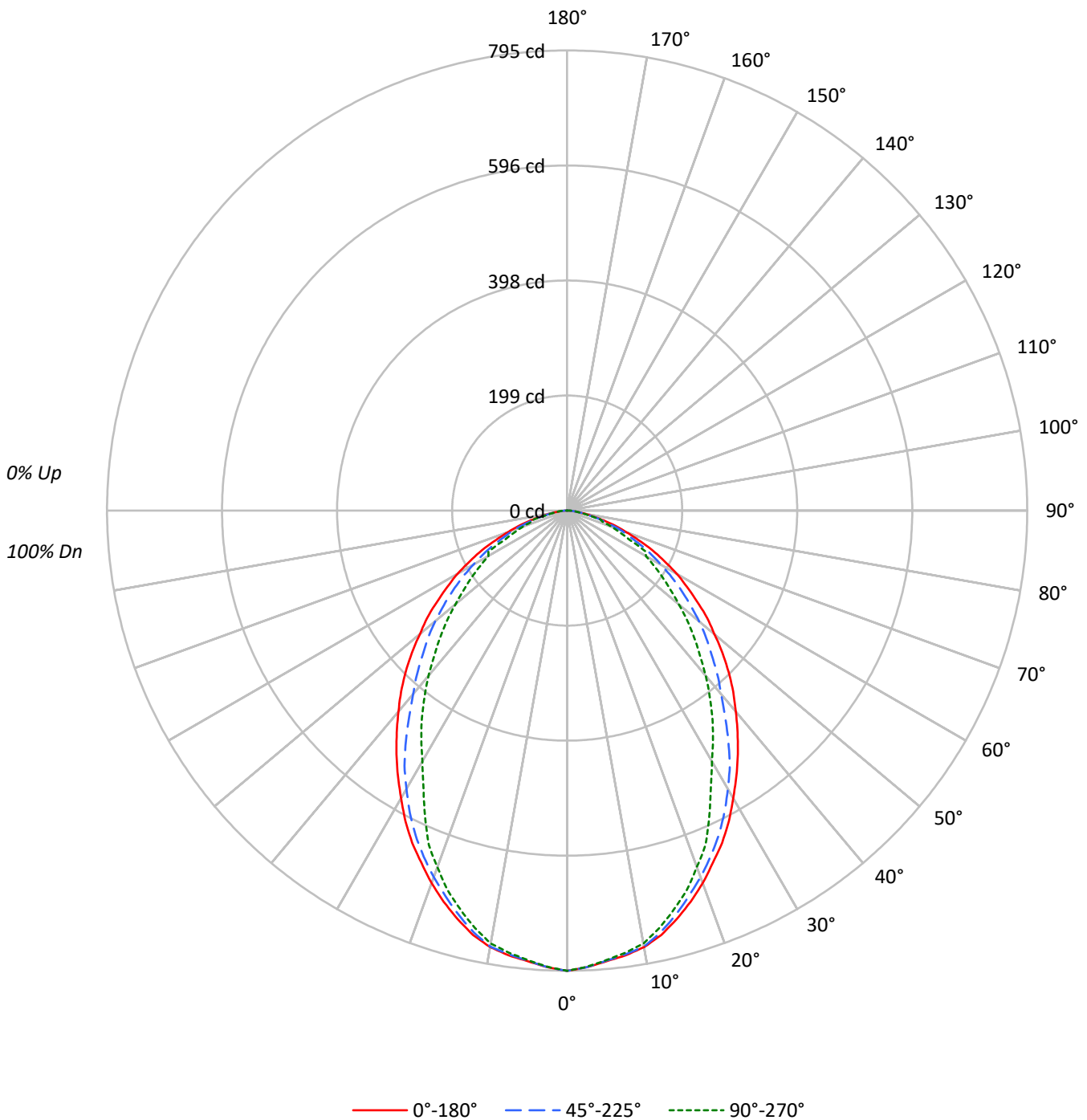
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8559	8559	8559
5°	8443	8432	8423
10°	8369	8359	8299
15°	8144	8062	7949
20°	7844	7718	7507
25°	7523	7359	6900
30°	7129	6901	6216
35°	6753	6378	5750
40°	6368	5813	5231
45°	6004	5374	4730
50°	5556	4987	4218
55°	5140	4519	3778
60°	4710	4036	3384
65°	4144	3535	2998
70°	3415	3097	2546
75°	2716	2371	2487
80°	1822	1711	1593
85°	1136	1359	1593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6004 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.0	4.7
10°-20°	203.1	13.0
20°-30°	281.2	18.0
30°-40°	299.9	19.2
40°-50°	273.6	17.5
50°-60°	214.3	13.7
60°-70°	139.7	8.9
70°-80°	61.9	4.0
80°-90°	13.3	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°	558.4	35.8
0°-40°	858.3	55.0
0°-60°	1346.1	86.2
0°-90°	1561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1561.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	795	795	795	795	795	
5°	781	780	780	780	780	74
15°	731	731	724	716	713	205
25°	633	630	620	598	581	291
35°	514	510	485	449	438	321
45°	394	386	353	324	311	304
55°	274	266	241	212	201	246
65°	163	154	139	142	118	160
75°	65	61	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	795.2	795.2	795.2	795.2	795.2
2.5°	789.6	789.6	789.6	788.7	788.7
5°	781.4	780.4	780.4	779.5	779.5
7.5°	774.9	774.0	773.1	772.2	770.3
10°	765.7	765.7	764.8	760.2	759.3
12.5°	751.0	750.1	746.4	740.0	738.2
15°	730.8	730.8	723.5	716.1	713.3
17.5°	708.7	707.8	698.6	691.3	687.6
20°	684.8	683.0	673.8	661.9	655.4
22.5°	658.2	658.2	647.2	631.5	625.1
25°	633.4	629.7	619.6	597.5	581.0
27.5°	604.9	599.4	588.3	557.1	537.8
30°	573.6	570.9	555.2	514.8	500.1
32.5°	544.2	539.6	523.1	480.8	468.8
35°	513.9	510.2	485.4	448.6	437.6
37.5°	483.5	478.9	447.7	418.3	404.5
40°	453.2	447.7	413.7	387.0	372.3
42.5°	424.7	417.3	384.2	355.8	339.2
45°	394.4	386.1	353.0	323.6	310.7
47.5°	364.0	356.7	326.3	296.0	281.3
50°	331.8	325.4	297.8	267.5	251.9
52.5°	305.2	295.1	268.4	238.1	225.2
55°	273.9	265.7	240.8	212.3	201.3
57.5°	245.4	237.2	214.2	187.5	178.3
60°	218.8	206.8	187.5	164.5	157.2
62.5°	189.4	180.2	163.6	144.3	153.5
65°	162.7	153.5	138.8	141.6	117.7
67.5°	133.3	128.7	115.8	103.0	99.3
70°	108.5	103.0	98.4	84.6	80.9
72.5°	86.4	80.9	74.5	67.1	64.3
75°	65.3	60.7	57.0	54.2	59.8
77.5°	45.0	43.2	40.4	37.7	36.8
80°	29.4	28.5	27.6	26.7	25.7
82.5°	17.5	17.5	17.5	17.5	17.5
85°	9.2	10.1	11.0	12.0	12.9
87.5°	5.5	5.5	6.4	7.4	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)