

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: P559114

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559114
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-81-94-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1560.0 lumens
Efficiency: N/A
Efficacy: 72.2 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

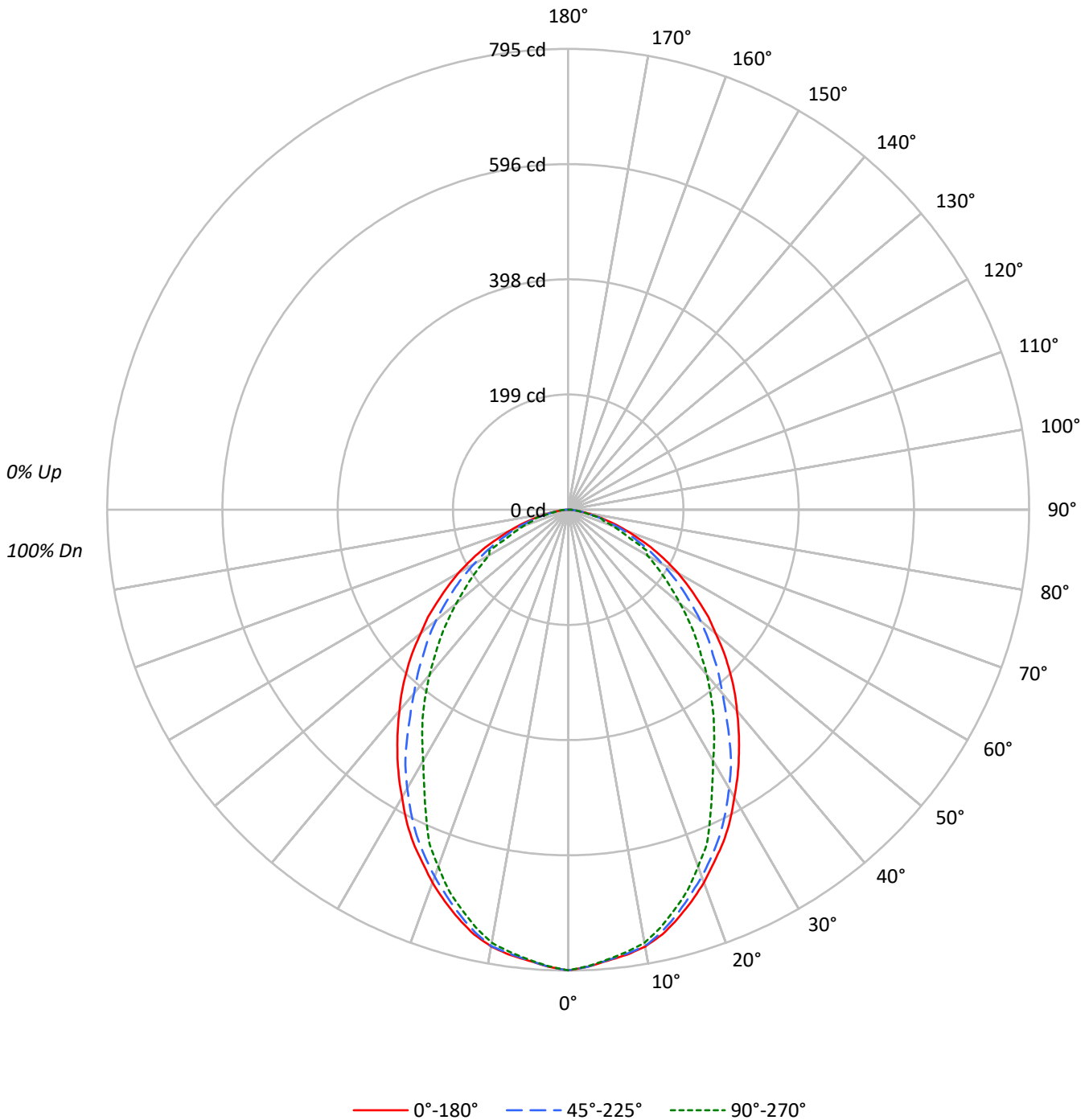
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8553	8553	8553
5°	8438	8427	8417
10°	8364	8354	8294
15°	8138	8057	7944
20°	7840	7714	7503
25°	7518	7354	6896
30°	7124	6897	6212
35°	6748	6374	5746
40°	6364	5809	5228
45°	5999	5370	4727
50°	5553	4984	4215
55°	5138	4517	3776
60°	4706	4034	3382
65°	4141	3533	2995
70°	3412	3094	2543
75°	2712	2371	2483
80°	1822	1711	1593
85°	1136	1359	1593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5999 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.0	4.7
10°-20°	203.0	13.0
20°-30°	281.1	18.0
30°-40°	299.7	19.2
40°-50°	273.4	17.5
50°-60°	214.2	13.7
60°-70°	139.6	8.9
70°-80°	61.8	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°	558.0	35.8
0°-40°	857.7	55.0
0°-60°	1345.3	86.2
0°-90°	1560.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1560.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	795	795	795	795	795	
5°	781	780	780	779	779	74
15°	730	730	723	716	713	205
25°	633	629	619	597	581	291
35°	514	510	485	448	437	321
45°	394	386	353	323	310	304
55°	274	266	241	212	201	246
65°	163	153	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°	794.6	794.6	794.6	794.6	794.6
2.5°	789.1	789.1	789.1	788.2	788.2
5°	780.9	779.9	779.9	779.0	779.0
7.5°	774.4	773.5	772.6	771.7	769.8
10°	765.2	765.2	764.3	759.7	758.8
12.5°	750.5	749.6	746.0	739.5	737.7
15°	730.3	730.3	723.0	715.6	712.9
17.5°	708.3	707.4	698.2	690.8	687.2
20°	684.4	682.6	673.4	661.4	655.0
22.5°	657.8	657.8	646.7	631.1	624.7
25°	633.0	629.3	619.2	597.1	580.6
27.5°	604.5	599.0	587.9	556.7	537.4
30°	573.2	570.5	554.9	514.5	499.8
32.5°	543.8	539.3	522.7	480.5	468.5
35°	513.5	509.9	485.1	448.3	437.3
37.5°	483.2	478.6	447.4	418.0	404.2
40°	452.9	447.4	413.4	386.8	372.1
42.5°	424.4	417.1	384.0	355.5	339.0
45°	394.1	385.8	352.8	323.4	310.5
47.5°	363.8	356.4	326.1	295.8	281.1
50°	331.6	325.2	297.6	267.3	251.7
52.5°	305.0	294.9	268.2	237.9	225.1
55°	273.8	265.5	240.7	212.2	201.2
57.5°	245.3	237.0	214.0	187.4	178.2
60°	218.6	206.7	187.4	164.4	157.1
62.5°	189.2	180.1	163.5	144.2	153.4
65°	162.6	153.4	138.7	141.5	117.6
67.5°	133.2	128.6	115.8	102.9	99.2
70°	108.4	102.9	98.3	84.5	80.8
72.5°	86.4	80.8	74.4	67.1	64.3
75°	65.2	60.6	57.0	54.2	59.7
77.5°	45.0	43.2	40.4	37.7	36.7
80°	29.4	28.5	27.6	26.6	25.7
82.5°	17.5	17.5	17.5	17.5	17.5
85°	9.2	10.1	11.0	11.9	12.9
87.5°	5.5	5.5	6.4	7.3	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)