

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: P559140

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559140
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-93-86-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1591.0 lumens
Efficiency: N/A
Efficacy: 73.7 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

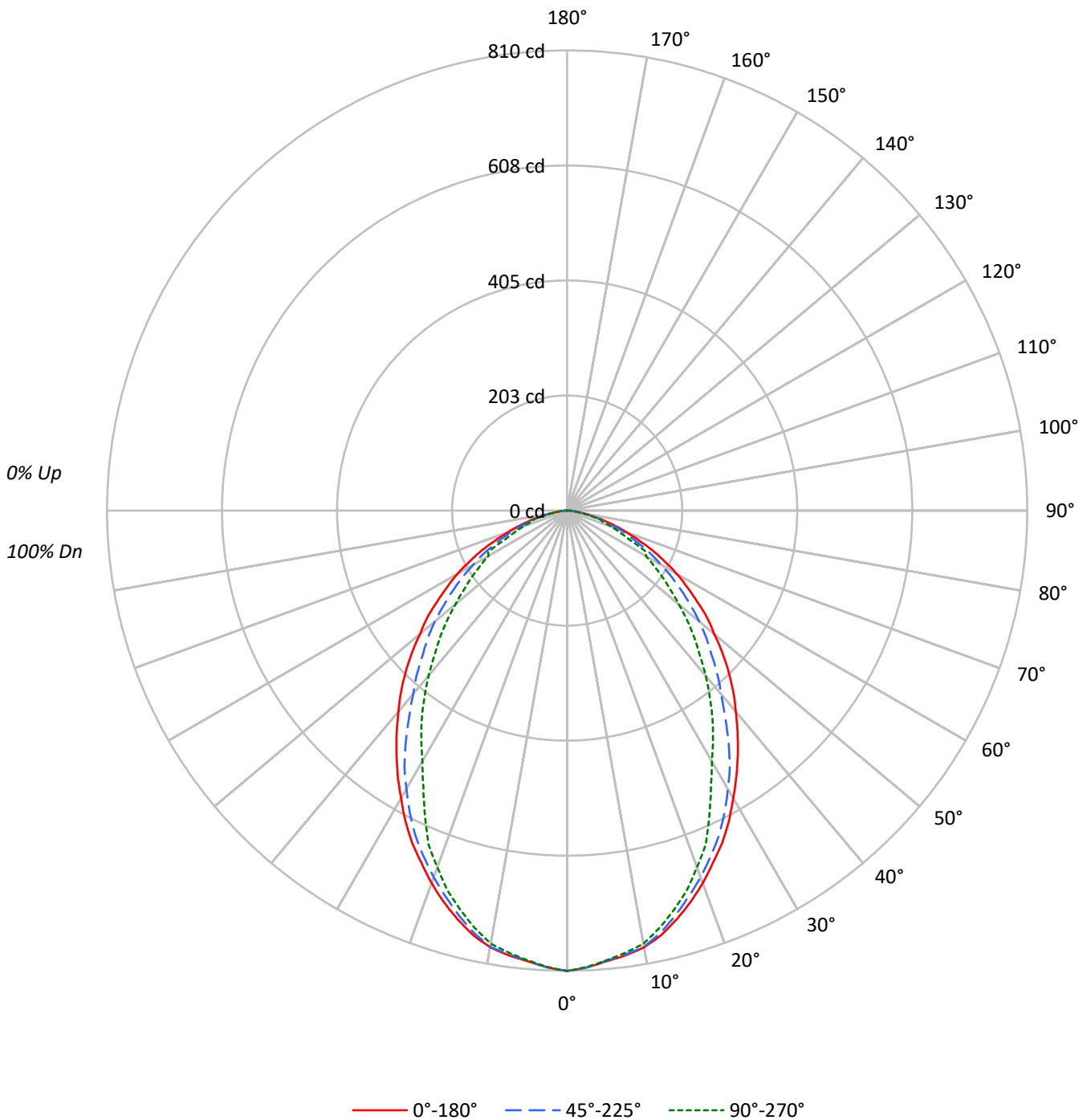
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	8723	8723	8723
5°	8605	8594	8585
10°	8531	8520	8459
15°	8300	8217	8101
20°	7995	7867	7652
25°	7666	7500	7032
30°	7266	7034	6335
35°	6882	6501	5861
40°	6490	5924	5332
45°	6118	5477	4821
50°	5663	5084	4299
55°	5240	4607	3851
60°	4801	4114	3449
65°	4223	3604	3054
70°	3481	3157	2593
75°	2766	2416	2533
80°	1860	1742	1624
85°	1161	1383	1618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6118 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.4	4.7
10°-20°	207.0	13.0
20°-30°	286.6	18.0
30°-40°	305.6	19.2
40°-50°	278.8	17.5
50°-60°	218.4	13.7
60°-70°	142.4	8.9
70°-80°	63.1	4.0
80°-90°	13.5	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°	569.1	35.8
0°-40°	874.7	55.0
0°-60°	1372.0	86.2
0°-90°	1591.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1591.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	796	795	795	794	794	76
15°	745	745	737	730	727	209
25°	646	642	632	609	592	296
35°	524	520	495	457	446	327
45°	402	394	360	330	317	310
55°	279	271	246	216	205	250
65°	166	156	142	144	120	163
75°	66	62	58	55	61	71
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°	810.4	810.4	810.4	810.4	810.4
2.5°	804.8	804.8	804.8	803.9	803.9
5°	796.4	795.4	795.4	794.5	794.5
7.5°	789.8	788.9	787.9	787.0	785.1
10°	780.5	780.5	779.5	774.8	773.9
12.5°	765.5	764.5	760.8	754.2	752.3
15°	744.8	744.8	737.4	729.9	727.0
17.5°	722.4	721.4	712.1	704.6	700.8
20°	698.0	696.1	686.8	674.6	668.0
22.5°	670.8	670.8	659.6	643.7	637.1
25°	645.5	641.8	631.5	609.0	592.1
27.5°	616.5	610.9	599.6	567.8	548.1
30°	584.6	581.8	565.9	524.7	509.7
32.5°	554.7	550.0	533.1	490.0	477.8
35°	523.7	520.0	494.7	457.2	446.0
37.5°	492.8	488.1	456.3	426.3	412.2
40°	461.9	456.3	421.6	394.4	379.5
42.5°	432.9	425.4	391.6	362.6	345.7
45°	401.9	393.5	359.8	329.8	316.7
47.5°	371.0	363.5	332.6	301.7	286.7
50°	338.2	331.7	303.6	272.6	256.7
52.5°	311.1	300.8	273.6	242.7	229.5
55°	279.2	270.8	245.5	216.4	205.2
57.5°	250.2	241.7	218.3	191.1	181.8
60°	223.0	210.8	191.1	167.7	160.2
62.5°	193.0	183.6	166.8	147.1	156.5
65°	165.8	156.5	141.5	144.3	119.9
67.5°	135.9	131.2	118.1	104.9	101.2
70°	110.6	104.9	100.3	86.2	82.4
72.5°	88.1	82.4	75.9	68.4	65.6
75°	66.5	61.8	58.1	55.3	60.9
77.5°	45.9	44.0	41.2	38.4	37.5
80°	30.0	29.0	28.1	27.2	26.2
82.5°	17.8	17.8	17.8	17.8	17.8
85°	9.4	10.3	11.2	12.2	13.1
87.5°	5.6	5.6	6.6	7.5	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)