

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: P559146

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559146
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-93-94-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1645.0 lumens
Efficiency: N/A
Efficacy: 76.2 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

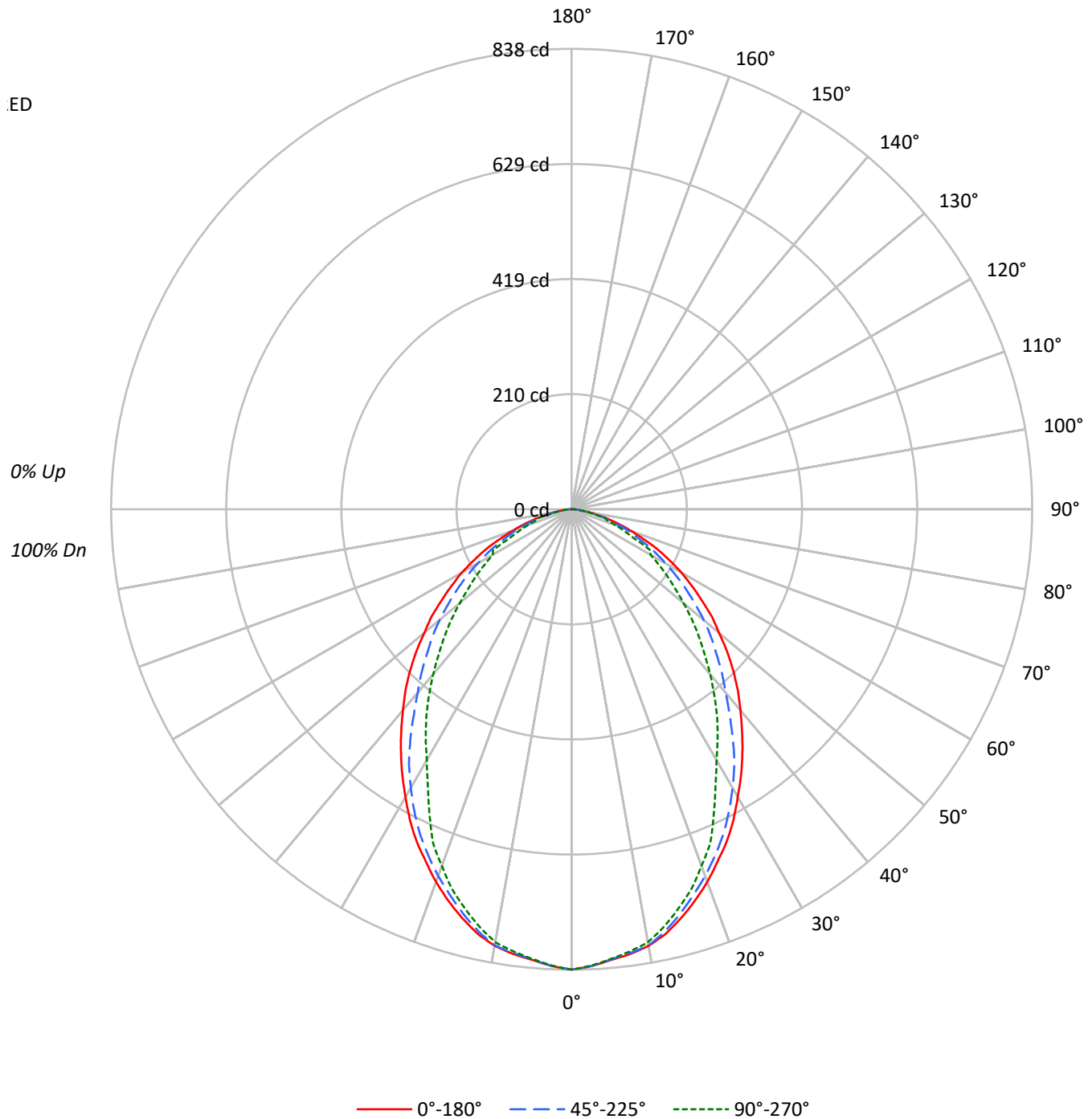
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	9019	9019	9019
5°	8897	8886	8876
10°	8819	8810	8746
15°	8582	8496	8377
20°	8267	8134	7912
25°	7926	7754	7271
30°	7513	7272	6550
35°	7115	6721	6059
40°	6711	6125	5512
45°	6326	5663	4984
50°	5856	5256	4444
55°	5418	4763	3980
60°	4964	4254	3567
65°	4368	3726	3158
70°	3597	3264	2681
75°	2861	2499	2620
80°	1922	1804	1680
85°	1198	1433	1680

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6326 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	4.7
10°-20°	214.1	13.0
20°-30°	296.4	18.0
30°-40°	316.0	19.2
40°-50°	288.3	17.5
50°-60°	225.9	13.7
60°-70°	147.2	8.9
70°-80°	65.2	4.0
80°-90°	14.0	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
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0°-30°	588.4	35.8
0°-40°	904.4	55.0
0°-60°	1418.6	86.2
0°-90°	1645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	823	822	822	822	822	78
15°	770	770	762	755	752	217
25°	667	664	653	630	612	306
35°	542	538	512	473	461	339
45°	416	407	372	341	327	320
55°	289	280	254	224	212	259
65°	172	162	146	149	124	169
75°	69	64	60	57	63	74
85°	10	11	12	13	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	837.9	837.9	837.9	837.9	837.9
2.5°	832.1	832.1	832.1	831.2	831.2
5°	823.4	822.4	822.4	821.5	821.5
7.5°	816.6	815.7	814.7	813.7	811.8
10°	806.9	806.9	806.0	801.1	800.2
12.5°	791.4	790.5	786.6	779.8	777.9
15°	770.1	770.1	762.4	754.6	751.7
17.5°	746.9	745.9	736.2	728.5	724.6
20°	721.7	719.8	710.1	697.5	690.7
22.5°	693.6	693.6	682.0	665.5	658.7
25°	667.4	663.6	652.9	629.7	612.2
27.5°	637.4	631.6	620.0	587.0	566.7
30°	604.5	601.6	585.1	542.5	527.0
32.5°	573.5	568.6	551.2	506.6	494.0
35°	541.5	537.6	511.5	472.7	461.1
37.5°	509.5	504.7	471.8	440.8	426.2
40°	477.6	471.8	435.9	407.8	392.3
42.5°	447.5	439.8	404.9	374.9	357.5
45°	415.6	406.9	372.0	341.0	327.4
47.5°	383.6	375.9	343.9	311.9	296.4
50°	349.7	342.9	313.9	281.9	265.4
52.5°	321.6	311.0	282.9	250.9	237.3
55°	288.7	280.0	253.8	223.8	212.1
57.5°	258.6	249.9	225.7	197.6	187.9
60°	230.6	218.0	197.6	173.4	165.7
62.5°	199.6	189.9	172.4	152.1	161.8
65°	171.5	161.8	146.3	149.2	124.0
67.5°	140.5	135.6	122.1	108.5	104.6
70°	114.3	108.5	103.7	89.1	85.2
72.5°	91.1	85.2	78.5	70.7	67.8
75°	68.8	63.9	60.1	57.2	63.0
77.5°	47.5	45.5	42.6	39.7	38.7
80°	31.0	30.0	29.1	28.1	27.1
82.5°	18.4	18.4	18.4	18.4	18.4
85°	9.7	10.7	11.6	12.6	13.6
87.5°	5.8	5.8	6.8	7.7	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)