

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: P559660

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559660
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-35-UNV-93-96-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1555.0 lumens
Efficiency: N/A
Efficacy: 72.0 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

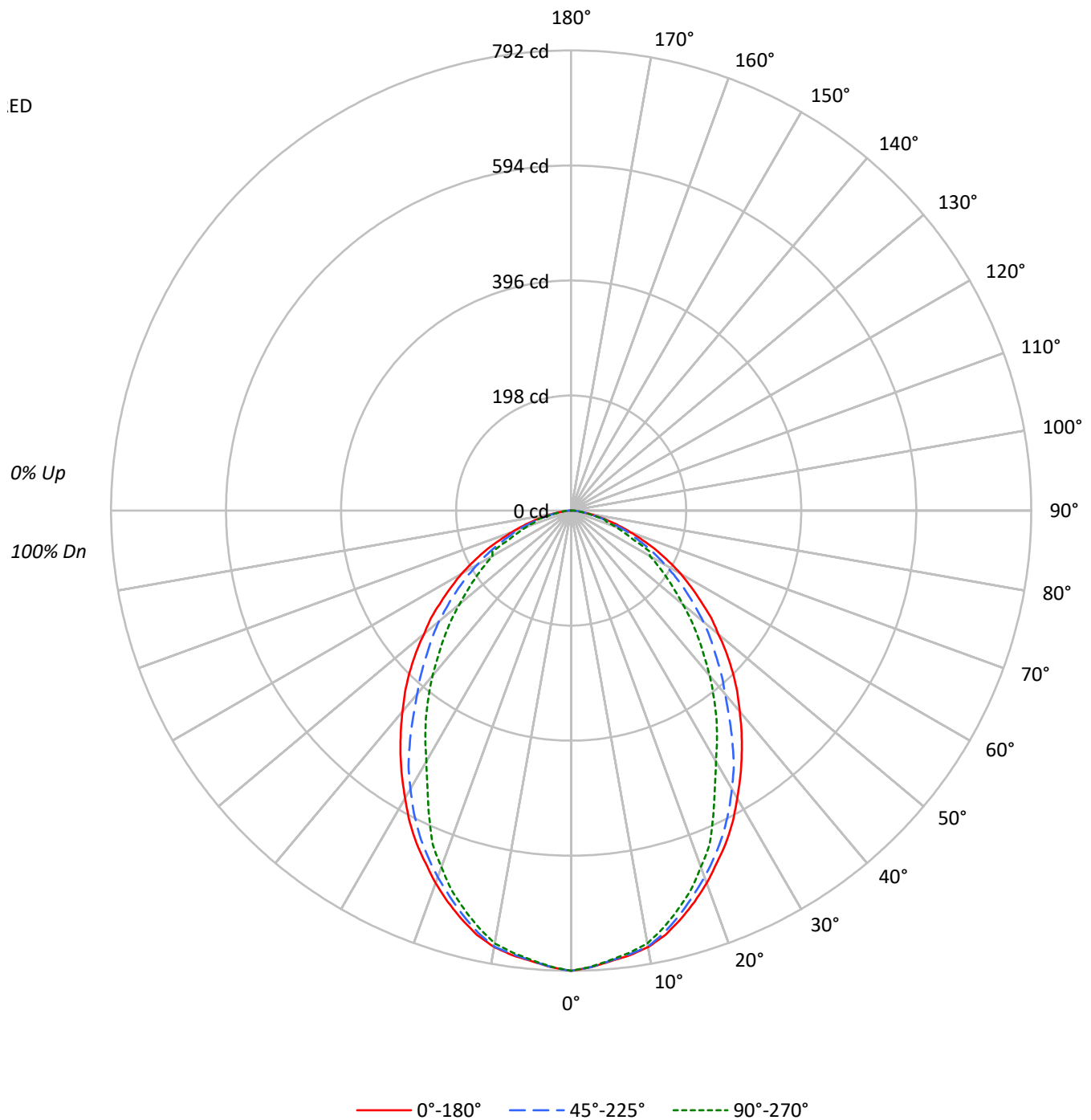
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4263	4263	4263
5°	4205	4200	4195
10°	4169	4164	4134
15°	4056	4016	3959
20°	3907	3844	3739
25°	3746	3665	3437
30°	3551	3437	3096
35°	3363	3177	2864
40°	3171	2895	2606
45°	2990	2676	2356
50°	2768	2484	2101
55°	2561	2251	1881
60°	2345	2011	1686
65°	2064	1761	1493
70°	1701	1542	1268
75°	1352	1181	1237
80°	908	852	793
85°	568	679	790

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2990 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	4.7
10°-20°	202.4	13.0
20°-30°	280.1	18.0
30°-40°	298.7	19.2
40°-50°	272.5	17.5
50°-60°	213.5	13.7
60°-70°	139.2	8.9
70°-80°	61.6	4.0
80°-90°	13.2	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°	556.2	35.8
0°-40°	855.0	55.0
0°-60°	1341.0	86.2
0°-90°	1555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	778	777	777	776	776	74
15°	728	728	721	713	711	205
25°	631	627	617	595	579	290
35°	512	508	484	447	436	320
45°	393	385	352	322	310	303
55°	273	265	240	212	200	245
65°	162	153	138	141	117	160
75°	65	60	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°	792.1	792.1	792.1	792.1	792.1
2.5°	786.6	786.6	786.6	785.7	785.7
5°	778.4	777.4	777.4	776.5	776.5
7.5°	772.0	771.0	770.1	769.2	767.4
10°	762.8	762.8	761.9	757.3	756.4
12.5°	748.1	747.2	743.6	737.2	735.3
15°	728.0	728.0	720.7	713.3	710.6
17.5°	706.0	705.1	695.9	688.6	685.0
20°	682.2	680.4	671.2	659.3	652.9
22.5°	655.7	655.7	644.7	629.1	622.7
25°	630.9	627.3	617.2	595.2	578.7
27.5°	602.5	597.0	586.1	554.9	535.7
30°	571.4	568.7	553.1	512.8	498.2
32.5°	542.1	537.5	521.0	478.9	467.0
35°	511.9	508.2	483.5	446.9	435.9
37.5°	481.7	477.1	446.0	416.7	402.9
40°	451.4	446.0	412.1	385.5	370.9
42.5°	423.1	415.7	382.8	354.4	337.9
45°	392.8	384.6	351.6	322.3	309.5
47.5°	362.6	355.3	325.1	294.9	280.2
50°	330.6	324.2	296.7	266.5	250.9
52.5°	304.0	293.9	267.4	237.2	224.4
55°	272.9	264.6	239.9	211.5	200.5
57.5°	244.5	236.3	213.4	186.8	177.6
60°	217.9	206.0	186.8	163.9	156.6
62.5°	188.6	179.5	163.0	143.8	152.9
65°	162.1	152.9	138.3	141.0	117.2
67.5°	132.8	128.2	115.4	102.6	98.9
70°	108.1	102.6	98.0	84.2	80.6
72.5°	86.1	80.6	74.2	66.8	64.1
75°	65.0	60.4	56.8	54.0	59.5
77.5°	44.9	43.0	40.3	37.5	36.6
80°	29.3	28.4	27.5	26.6	25.6
82.5°	17.4	17.4	17.4	17.4	17.4
85°	9.2	10.1	11.0	11.9	12.8
87.5°	5.5	5.5	6.4	7.3	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)