

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: P589933

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589933
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-50-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2463.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

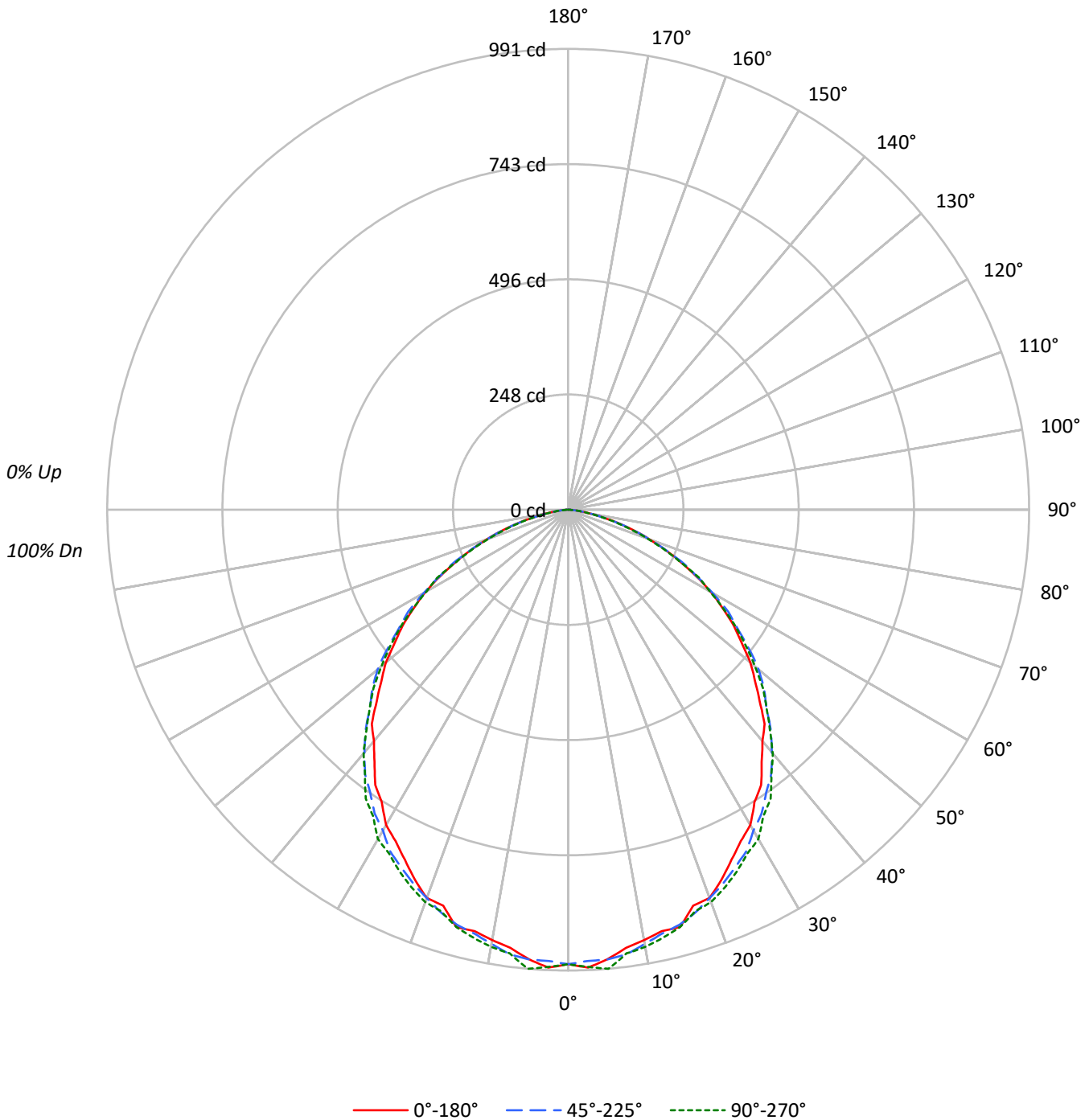
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86													86															
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73													73															
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62													62															
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53													53															
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46													46															
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41													41															
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36													36															
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32													32															
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29													29															
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26													26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2630	2630	2630
5°	2621	2622	2677
10°	2568	2590	2609
15°	2588	2574	2589
20°	2545	2545	2572
25°	2466	2520	2548
30°	2432	2475	2541
35°	2375	2437	2492
40°	2283	2393	2403
45°	2214	2293	2296
50°	2141	2238	2195
55°	2040	2080	2065
60°	1907	1927	1892
65°	1701	1744	1689
70°	1459	1464	1423
75°	1156	1153	1108
80°	775	753	724
85°	420	417	389

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2351 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	3.7
10°-20°	260.5	10.6
20°-30°	390.3	15.8
30°-40°	462.6	18.8
40°-50°	463.5	18.8
50°-60°	393.4	16.0
60°-70°	265.2	10.8
70°-80°	116.5	4.7
80°-90°	18.9	0.8
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°	742.8	30.2
0°-40°	1205.4	48.9
0°-60°	2062.3	83.7
0°-90°	2463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2463.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	977	977	977	977	977	
5°	970	968	971	968	991	91
15°	929	918	924	929	929	259
25°	831	835	849	860	858	384
35°	723	725	742	759	759	449
45°	582	592	602	618	603	450
55°	435	432	443	440	440	387
65°	267	264	274	264	265	266
75°	111	109	111	103	107	119
85°	14	13	14	13	13	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	977.3	977.3	977.3	977.3	977.3
2.5°	985.7	978.3	971.3	979.4	984.3
5°	970.3	968.0	970.7	967.8	991.1
7.5°	950.4	959.1	964.1	961.0	962.4
10°	939.8	936.8	948.0	955.8	954.7
12.5°	928.4	933.0	933.6	942.1	942.8
15°	929.1	918.3	924.0	928.8	929.2
17.5°	893.0	904.6	908.5	919.5	905.8
20°	888.6	880.1	888.6	899.8	898.0
22.5°	861.4	852.0	870.1	880.1	879.5
25°	830.6	835.2	848.8	859.9	858.1
27.5°	803.6	808.9	828.4	843.6	833.8
30°	782.8	780.2	796.6	810.2	817.8
32.5°	745.6	755.2	774.4	787.9	780.7
35°	723.0	725.2	741.9	759.1	758.6
37.5°	683.5	693.5	717.1	721.9	717.5
40°	649.8	659.8	681.1	686.3	684.1
42.5°	625.0	626.7	645.0	651.0	641.5
45°	581.7	592.5	602.4	617.9	603.3
47.5°	544.8	549.9	571.1	575.2	567.6
50°	511.4	513.2	534.5	529.3	524.3
52.5°	469.4	476.8	488.8	487.8	481.9
55°	434.8	431.9	443.3	440.2	440.1
57.5°	393.3	398.3	407.7	402.9	395.2
60°	354.4	354.6	358.0	352.5	351.5
62.5°	311.2	312.7	313.4	306.7	317.6
65°	267.1	263.6	273.9	263.5	265.2
67.5°	226.6	228.4	227.4	220.8	223.3
70°	185.5	187.8	186.1	178.7	180.9
72.5°	147.9	145.1	146.9	137.5	141.8
75°	111.2	108.9	110.9	103.1	106.6
77.5°	75.7	77.5	76.2	72.0	74.4
80°	50.0	48.6	48.6	46.2	46.7
82.5°	29.1	27.8	27.4	26.6	27.8
85°	13.6	13.2	13.5	13.1	12.6
87.5°	4.9	5.0	5.0	4.8	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)