

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: P589909

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589909
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-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2458.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

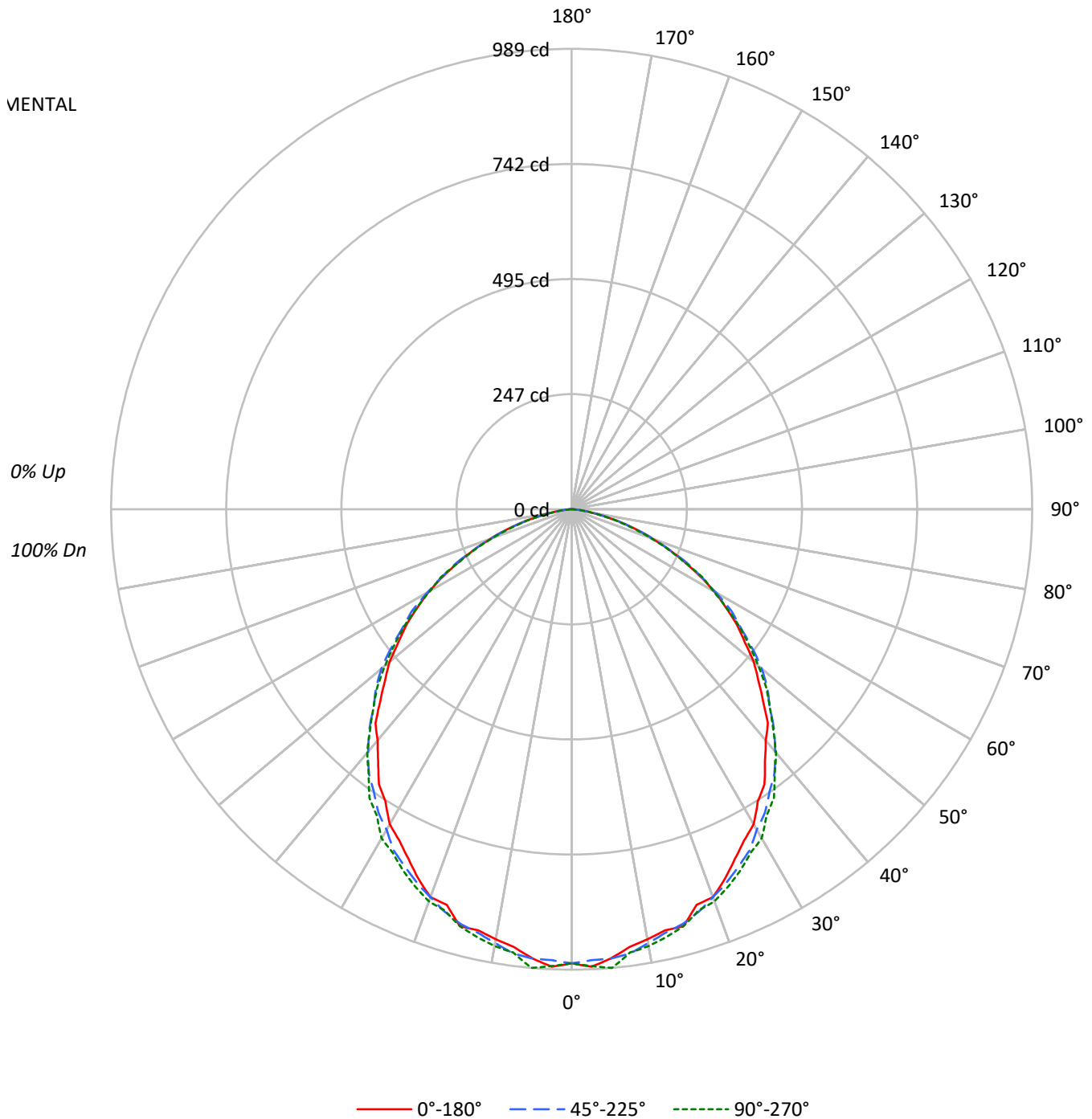
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2625	2625	2625
5°	2616	2617	2672
10°	2563	2585	2603
15°	2583	2569	2583
20°	2539	2539	2566
25°	2461	2515	2543
30°	2427	2470	2536
35°	2370	2432	2487
40°	2278	2388	2399
45°	2209	2288	2291
50°	2137	2233	2190
55°	2036	2076	2061
60°	1904	1922	1888
65°	1698	1741	1685
70°	1456	1461	1421
75°	1153	1151	1106
80°	773	752	722
85°	420	417	389

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2347 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.7	3.7
10°-20°	260.0	10.6
20°-30°	389.5	15.8
30°-40°	461.7	18.8
40°-50°	462.5	18.8
50°-60°	392.6	16.0
60°-70°	264.7	10.8
70°-80°	116.3	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°	741.3	30.2
0°-40°	1203.0	48.9
0°-60°	2058.1	83.7
0°-90°	2458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2458.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	975	975	975	975	975	
5°	968	966	969	966	989	91
15°	927	916	922	927	927	258
25°	829	834	847	858	856	383
35°	722	724	740	758	757	448
45°	580	591	601	617	602	449
55°	434	431	442	439	439	386
65°	267	263	273	263	265	265
75°	111	109	111	103	106	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°	975.3	975.3	975.3	975.3	975.3
2.5°	983.7	976.3	969.4	977.4	982.3
5°	968.3	966.1	968.7	965.8	989.1
7.5°	948.5	957.1	962.2	959.0	960.4
10°	937.9	934.9	946.1	953.9	952.7
12.5°	926.5	931.1	931.7	940.1	940.9
15°	927.2	916.5	922.1	926.9	927.3
17.5°	891.2	902.7	906.6	917.6	904.0
20°	886.7	878.3	886.7	898.0	896.2
22.5°	859.7	850.2	868.4	878.3	877.7
25°	828.9	833.5	847.1	858.2	856.4
27.5°	802.0	807.3	826.7	841.9	832.1
30°	781.2	778.6	795.0	808.6	816.1
32.5°	744.1	753.6	772.8	786.3	779.1
35°	721.5	723.7	740.4	757.6	757.0
37.5°	682.1	692.1	715.6	720.4	716.0
40°	648.5	658.5	679.7	684.9	682.8
42.5°	623.7	625.5	643.7	649.6	640.2
45°	580.5	591.3	601.2	616.6	602.0
47.5°	543.7	548.8	569.9	574.1	566.4
50°	510.4	512.1	533.4	528.2	523.2
52.5°	468.4	475.9	487.8	486.8	480.9
55°	433.9	431.0	442.4	439.3	439.2
57.5°	392.5	397.5	406.9	402.1	394.4
60°	353.7	353.8	357.2	351.8	350.8
62.5°	310.5	312.0	312.8	306.1	316.9
65°	266.6	263.1	273.4	262.9	264.7
67.5°	226.2	227.9	226.9	220.4	222.9
70°	185.1	187.4	185.7	178.3	180.6
72.5°	147.6	144.8	146.6	137.3	141.5
75°	110.9	108.7	110.7	102.9	106.4
77.5°	75.6	77.3	76.1	71.9	74.3
80°	49.9	48.5	48.5	46.1	46.6
82.5°	29.1	27.7	27.3	26.6	27.7
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)