

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: P589859

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589859
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-35-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2254.0 lumens
Efficiency: N/A
Efficacy: 104.4 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

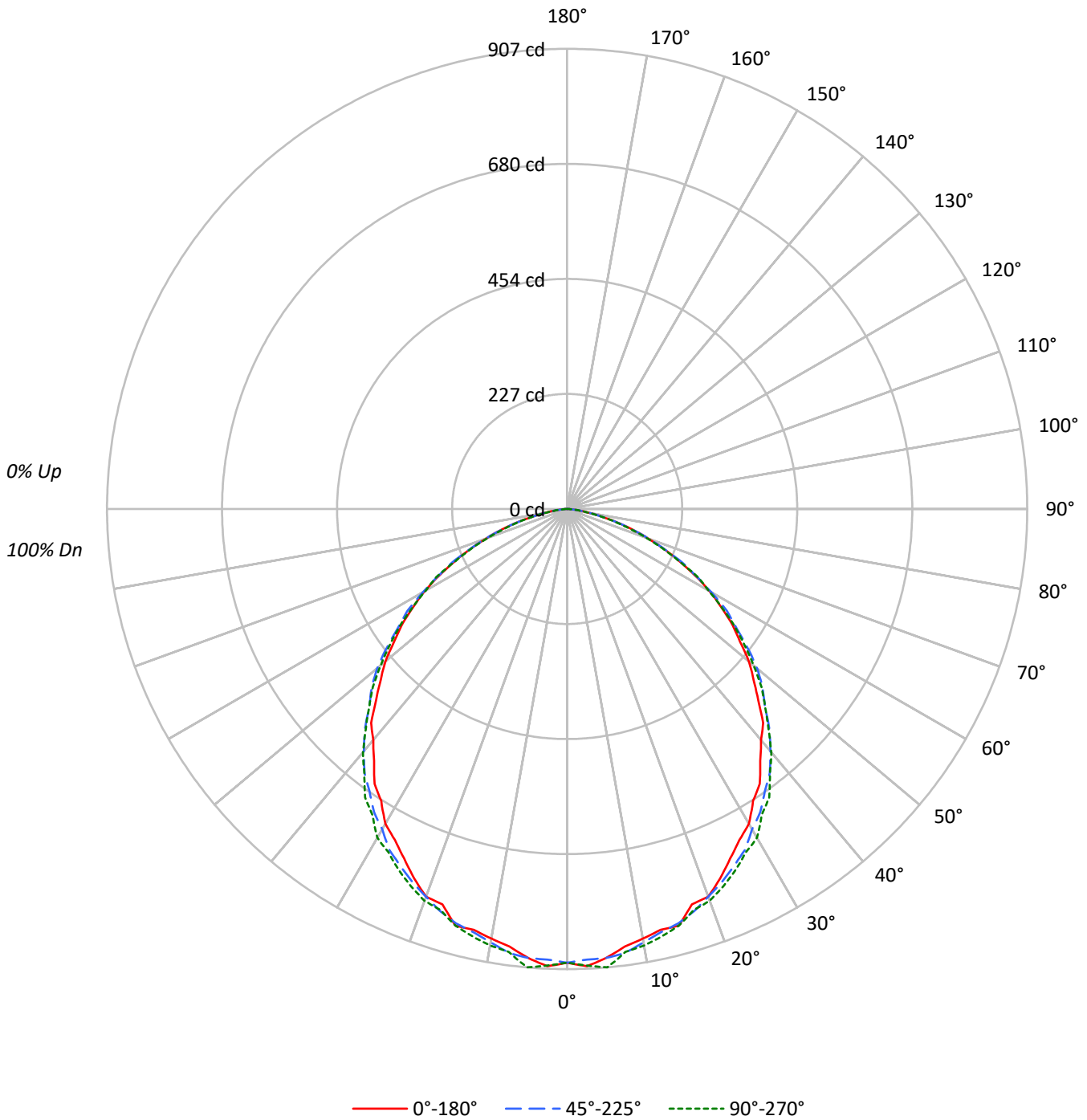
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2407	2407	2407
5°	2399	2400	2450
10°	2350	2370	2387
15°	2369	2356	2369
20°	2329	2329	2353
25°	2257	2306	2332
30°	2226	2265	2325
35°	2174	2231	2281
40°	2089	2190	2199
45°	2026	2098	2101
50°	1959	2048	2009
55°	1867	1903	1890
60°	1746	1763	1731
65°	1557	1596	1545
70°	1335	1340	1303
75°	1057	1055	1015
80°	708	690	662
85°	386	383	355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2152 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	3.7
10°-20°	238.4	10.6
20°-30°	357.2	15.8
30°-40°	423.4	18.8
40°-50°	424.1	18.8
50°-60°	360.0	16.0
60°-70°	242.7	10.8
70°-80°	106.7	4.7
80°-90°	17.3	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°	679.7	30.2
0°-40°	1103.1	48.9
0°-60°	1887.3	83.7
0°-90°	2254.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2254.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	888	886	888	886	907	84
15°	850	840	846	850	850	237
25°	760	764	777	787	785	351
35°	662	664	679	695	694	411
45°	532	542	551	566	552	412
55°	398	395	406	403	403	354
65°	244	241	251	241	243	243
75°	102	100	102	94	98	109
85°	12	12	12	12	12	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	894.3	894.3	894.3	894.3	894.3
2.5°	902.1	895.3	888.9	896.3	900.8
5°	888.0	885.9	888.3	885.7	907.0
7.5°	869.7	877.7	882.3	879.4	880.7
10°	860.0	857.3	867.5	874.7	873.7
12.5°	849.6	853.8	854.4	862.1	862.8
15°	850.2	840.4	845.6	850.0	850.3
17.5°	817.2	827.8	831.4	841.4	829.0
20°	813.2	805.4	813.2	823.4	821.8
22.5°	788.3	779.7	796.3	805.4	804.8
25°	760.2	764.3	776.8	786.9	785.3
27.5°	735.4	740.3	758.1	772.0	763.0
30°	716.4	714.0	729.0	741.4	748.4
32.5°	682.3	691.1	708.7	721.0	714.4
35°	661.7	663.6	679.0	694.7	694.2
37.5°	625.5	634.6	656.2	660.6	656.6
40°	594.7	603.8	623.3	628.1	626.1
42.5°	571.9	573.5	590.3	595.7	587.1
45°	532.3	542.3	551.3	565.5	552.1
47.5°	498.6	503.2	522.6	526.4	519.4
50°	468.0	469.6	489.1	484.4	479.8
52.5°	429.6	436.4	447.3	446.4	441.0
55°	397.9	395.3	405.7	402.9	402.8
57.5°	359.9	364.5	373.1	368.7	361.7
60°	324.4	324.5	327.6	322.6	321.7
62.5°	284.8	286.1	286.8	280.7	290.6
65°	244.5	241.2	250.7	241.1	242.7
67.5°	207.4	209.0	208.1	202.1	204.4
70°	169.7	171.8	170.3	163.5	165.6
72.5°	135.3	132.8	134.4	125.9	129.8
75°	101.7	99.7	101.5	94.3	97.6
77.5°	69.3	70.9	69.7	65.9	68.1
80°	45.7	44.5	44.5	42.3	42.7
82.5°	26.7	25.4	25.1	24.4	25.4
85°	12.5	12.1	12.4	12.0	11.5
87.5°	4.5	4.6	4.6	4.4	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)