

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: P589885

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589885
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-40-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2296.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

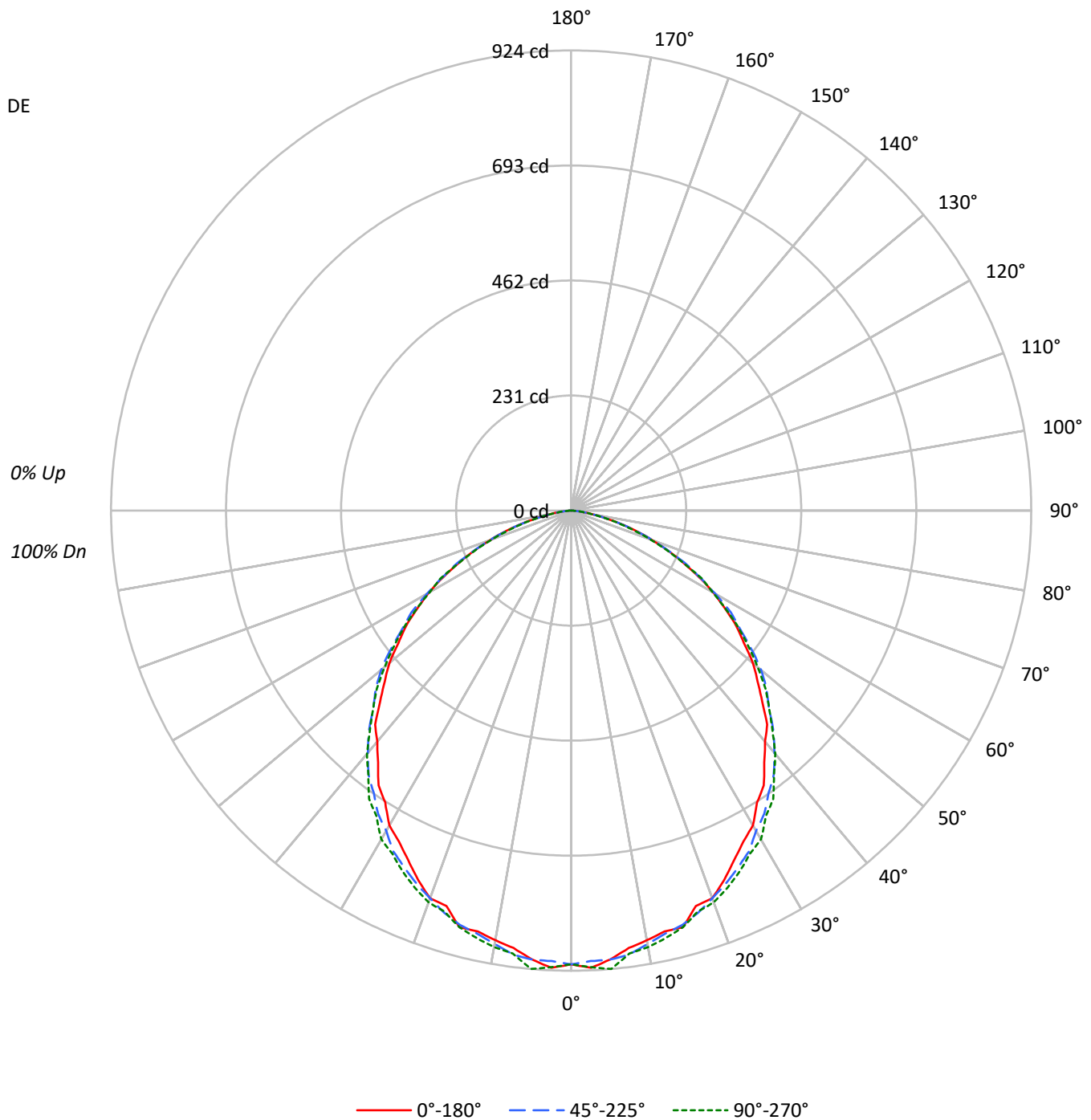
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2451	2451	2451
5°	2443	2444	2496
10°	2394	2415	2432
15°	2413	2400	2413
20°	2372	2372	2397
25°	2299	2350	2375
30°	2267	2307	2369
35°	2214	2272	2323
40°	2128	2230	2240
45°	2063	2137	2140
50°	1996	2086	2046
55°	1901	1939	1925
60°	1778	1796	1764
65°	1585	1626	1574
70°	1360	1365	1327
75°	1077	1075	1033
80°	722	702	674
85°	392	389	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2192 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.7	3.7
10°-20°	242.9	10.6
20°-30°	363.9	15.8
30°-40°	431.3	18.8
40°-50°	432.0	18.8
50°-60°	366.7	16.0
60°-70°	247.3	10.8
70°-80°	108.6	4.7
80°-90°	17.7	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°	692.4	30.2
0°-40°	1123.7	48.9
0°-60°	1922.4	83.7
0°-90°	2296.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2296.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	911	911	911	911	911	
5°	904	902	905	902	924	85
15°	866	856	861	866	866	241
25°	774	779	791	802	800	358
35°	674	676	692	708	707	418
45°	542	552	562	576	562	419
55°	405	403	413	410	410	361
65°	249	246	255	246	247	248
75°	104	102	103	96	99	111
85°	13	12	13	12	12	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	911.0	911.0	911.0	911.0	911.0
2.5°	918.9	911.9	905.5	913.0	917.6
5°	904.5	902.4	904.9	902.2	923.9
7.5°	885.9	894.1	898.8	895.8	897.1
10°	876.1	873.2	883.7	891.0	889.9
12.5°	865.5	869.7	870.3	878.2	878.9
15°	866.1	856.1	861.4	865.8	866.2
17.5°	832.4	843.2	846.9	857.1	844.4
20°	828.3	820.4	828.3	838.8	837.1
22.5°	803.0	794.2	811.1	820.4	819.8
25°	774.3	778.6	791.3	801.6	800.0
27.5°	749.1	754.1	772.2	786.4	777.3
30°	729.7	727.3	742.6	755.3	762.3
32.5°	695.0	704.0	721.9	734.4	727.7
35°	674.0	676.0	691.6	707.6	707.2
37.5°	637.2	646.5	668.5	672.9	668.8
40°	605.8	615.1	634.9	639.8	637.8
42.5°	582.6	584.2	601.3	606.8	598.0
45°	542.2	552.4	561.5	576.0	562.4
47.5°	507.9	512.6	532.4	536.2	529.1
50°	476.7	478.4	498.3	493.4	488.7
52.5°	437.6	444.5	455.7	454.7	449.2
55°	405.3	402.6	413.2	410.4	410.3
57.5°	366.6	371.3	380.0	375.6	368.4
60°	330.4	330.5	333.7	328.6	327.7
62.5°	290.1	291.5	292.2	285.9	296.1
65°	249.0	245.7	255.4	245.6	247.2
67.5°	211.3	212.9	212.0	205.8	208.2
70°	172.9	175.0	173.5	166.6	168.7
72.5°	137.9	135.3	136.9	128.2	132.2
75°	103.6	101.5	103.4	96.1	99.4
77.5°	70.6	72.2	71.0	67.2	69.4
80°	46.6	45.3	45.3	43.1	43.5
82.5°	27.2	25.9	25.5	24.8	25.9
85°	12.7	12.4	12.6	12.2	11.8
87.5°	4.6	4.7	4.7	4.5	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)