

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: P590274

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590274
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-LD4-2LO-40-UNV-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2802.0 lumens
Efficiency: N/A
Efficacy: 119.7 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

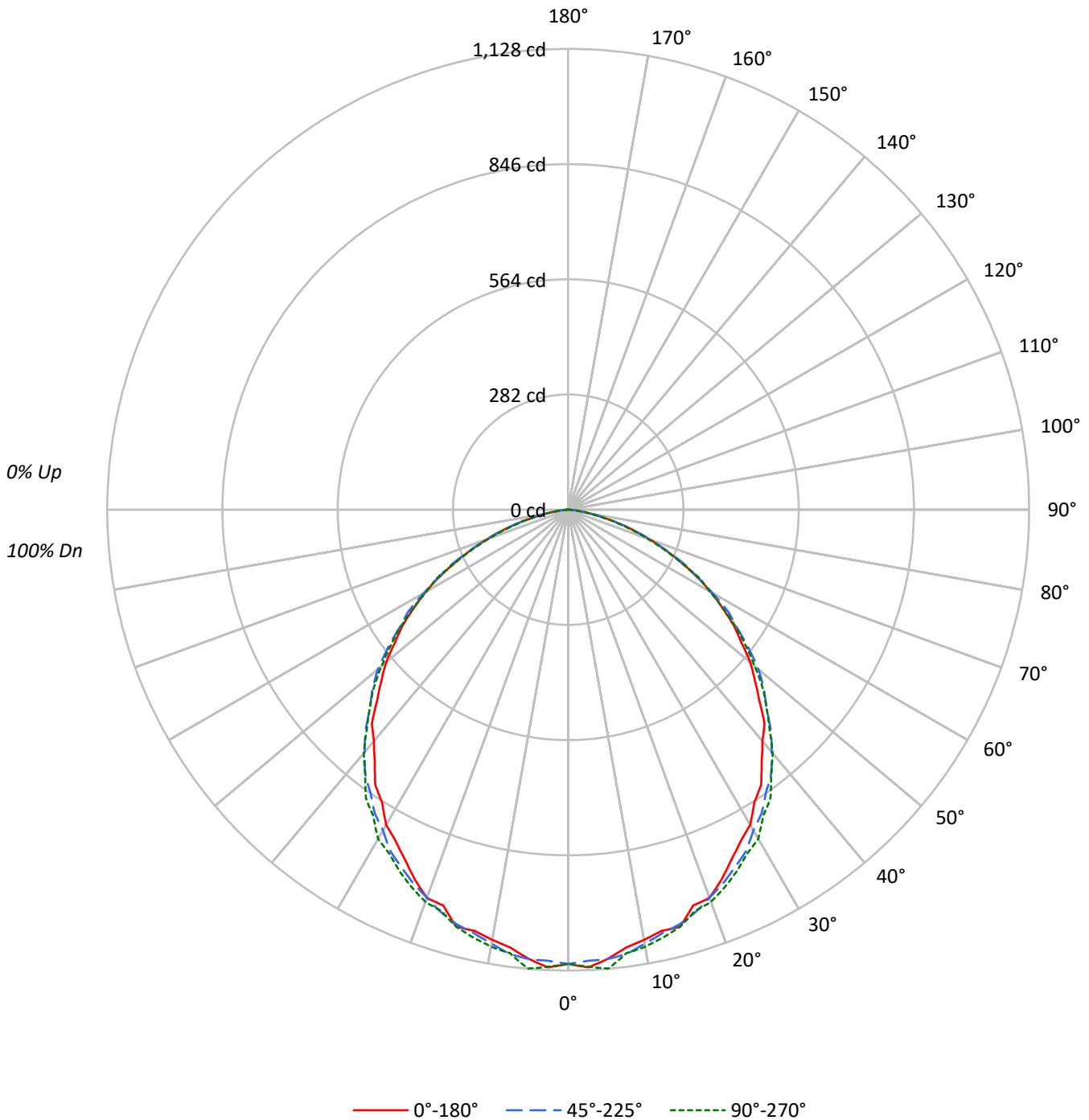
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2992	2992	2992
5°	2982	2983	3046
10°	2921	2947	2968
15°	2944	2929	2945
20°	2895	2895	2926
25°	2806	2867	2899
30°	2767	2816	2891
35°	2702	2773	2835
40°	2597	2722	2734
45°	2518	2608	2612
50°	2436	2546	2497
55°	2321	2366	2349
60°	2170	2192	2152
65°	1935	1984	1921
70°	1660	1666	1619
75°	1315	1312	1261
80°	880	857	823
85°	479	475	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2675 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.6	3.7
10°-20°	296.4	10.6
20°-30°	444.0	15.8
30°-40°	526.3	18.8
40°-50°	527.3	18.8
50°-60°	447.6	16.0
60°-70°	301.7	10.8
70°-80°	132.6	4.7
80°-90°	21.5	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°	845.0	30.2
0°-40°	1371.3	48.9
0°-60°	2346.1	83.7
0°-90°	2802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2802.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1104	1101	1104	1101	1128	104
15°	1057	1045	1051	1057	1057	294
25°	945	950	966	978	976	437
35°	822	825	844	864	863	511
45°	662	674	685	703	686	512
55°	495	491	504	501	501	440
65°	304	300	312	300	302	302
75°	126	124	126	117	121	136
85°	16	15	15	15	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1111.8	1111.8	1111.8	1111.8	1111.8
2.5°	1121.4	1112.9	1105.0	1114.2	1119.8
5°	1103.9	1101.3	1104.3	1101.0	1127.6
7.5°	1081.2	1091.1	1096.8	1093.2	1094.8
10°	1069.1	1065.7	1078.5	1087.4	1086.1
12.5°	1056.2	1061.4	1062.1	1071.7	1072.6
15°	1056.9	1044.7	1051.2	1056.6	1057.1
17.5°	1015.9	1029.1	1033.5	1046.0	1030.5
20°	1010.9	1001.2	1010.9	1023.6	1021.6
22.5°	980.0	969.2	989.9	1001.2	1000.5
25°	945.0	950.1	965.6	978.3	976.3
27.5°	914.2	920.3	942.4	959.7	948.6
30°	890.6	887.5	906.2	921.7	930.3
32.5°	848.2	859.1	880.9	896.3	888.1
35°	822.5	825.0	844.0	863.6	863.0
37.5°	777.6	788.9	815.8	821.2	816.2
40°	739.3	750.6	774.9	780.7	778.3
42.5°	711.0	713.0	733.8	740.6	729.8
45°	661.7	674.1	685.3	702.9	686.3
47.5°	619.8	625.6	649.7	654.4	645.7
50°	581.8	583.8	608.1	602.2	596.4
52.5°	534.0	542.5	556.1	554.9	548.2
55°	494.7	491.4	504.3	500.8	500.7
57.5°	447.4	453.2	463.8	458.3	449.6
60°	403.2	403.4	407.2	401.1	399.9
62.5°	354.0	355.7	356.6	349.0	361.3
65°	303.9	299.9	311.6	299.7	301.7
67.5°	257.8	259.8	258.7	251.2	254.1
70°	211.0	213.6	211.7	203.3	205.8
72.5°	168.2	165.1	167.1	156.5	161.3
75°	126.5	123.9	126.2	117.3	121.3
77.5°	86.1	88.1	86.7	82.0	84.7
80°	56.8	55.3	55.3	52.5	53.1
82.5°	33.2	31.6	31.1	30.3	31.6
85°	15.5	15.1	15.4	14.9	14.4
87.5°	5.6	5.7	5.7	5.5	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)