

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: P560487

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560487
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2LO-40-UNV-93-87-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2162.0 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

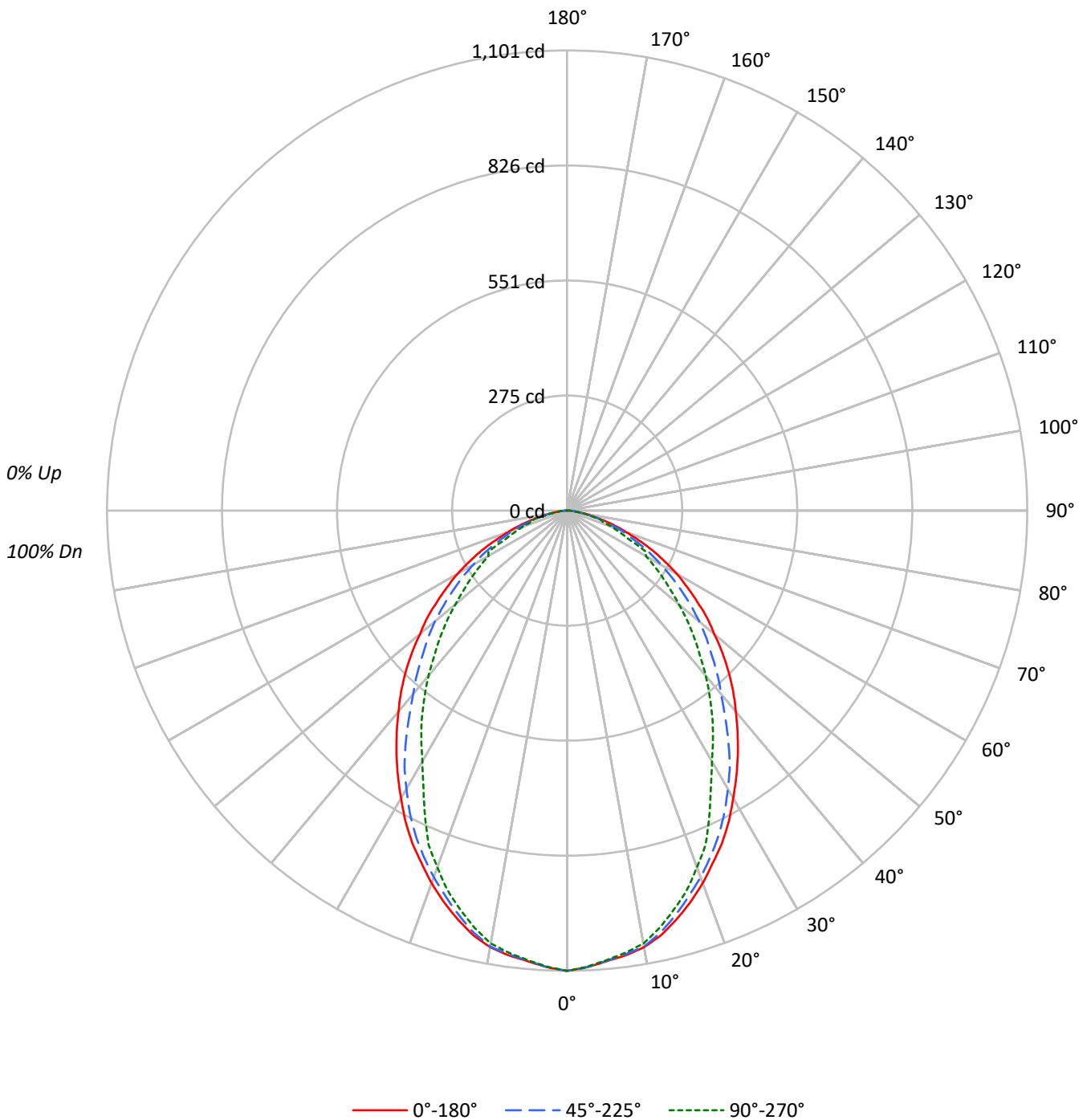
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5927	5927	5927
5°	5847	5840	5833
10°	5796	5789	5747
15°	5640	5583	5505
20°	5432	5345	5199
25°	5209	5096	4778
30°	4937	4779	4304
35°	4676	4416	3982
40°	4410	4025	3622
45°	4157	3721	3275
50°	3848	3454	2920
55°	3560	3130	2616
60°	3261	2795	2343
65°	2870	2448	2076
70°	2364	2143	1762
75°	1880	1641	1722
80°	1261	1184	1103
85°	784	945	1099

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4157 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.5	4.7
10°-20°	281.3	13.0
20°-30°	389.5	18.0
30°-40°	415.3	19.2
40°-50°	378.9	17.5
50°-60°	296.8	13.7
60°-70°	193.5	8.9
70°-80°	85.7	4.0
80°-90°	18.4	0.9
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°	773.4	35.8
0°-40°	1188.7	55.0
0°-60°	1864.4	86.2
0°-90°	2162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2162.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1101	1101	1101	1101	1101	
5°	1082	1081	1081	1080	1080	103
15°	1012	1012	1002	992	988	285
25°	877	872	858	828	805	403
35°	712	707	672	621	606	445
45°	546	535	489	448	430	421
55°	379	368	334	294	279	340
65°	225	213	192	196	163	222
75°	90	84	79	75	83	97
85°	13	14	15	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1101.3	1101.3	1101.3	1101.3	1101.3
2.5°	1093.7	1093.7	1093.7	1092.4	1092.4
5°	1082.2	1080.9	1080.9	1079.6	1079.6
7.5°	1073.3	1072.0	1070.7	1069.5	1066.9
10°	1060.6	1060.6	1059.3	1052.9	1051.6
12.5°	1040.2	1038.9	1033.8	1024.9	1022.4
15°	1012.2	1012.2	1002.0	991.8	988.0
17.5°	981.6	980.3	967.6	957.4	952.3
20°	948.5	946.0	933.2	916.7	907.8
22.5°	911.6	911.6	896.3	874.7	865.8
25°	877.2	872.1	858.1	827.6	804.6
27.5°	837.7	830.1	814.8	771.5	744.8
30°	794.5	790.6	769.0	713.0	692.6
32.5°	753.7	747.4	724.4	665.9	649.3
35°	711.7	706.6	672.2	621.3	606.0
37.5°	669.7	663.3	620.0	579.3	560.2
40°	627.7	620.0	572.9	536.0	515.6
42.5°	588.2	578.0	532.2	492.7	469.8
45°	546.2	534.7	488.9	448.2	430.3
47.5°	504.2	494.0	452.0	410.0	389.6
50°	459.6	450.7	412.5	370.5	348.8
52.5°	422.7	408.7	371.8	329.8	311.9
55°	379.4	367.9	333.6	294.1	278.8
57.5°	339.9	328.5	296.6	259.7	247.0
60°	303.0	286.5	259.7	227.9	217.7
62.5°	262.3	249.5	226.6	199.9	212.6
65°	225.4	212.6	192.2	196.1	163.0
67.5°	184.6	178.2	160.4	142.6	137.5
70°	150.2	142.6	136.2	117.1	112.0
72.5°	119.7	112.0	103.1	92.9	89.1
75°	90.4	84.0	78.9	75.1	82.8
77.5°	62.4	59.8	56.0	52.2	50.9
80°	40.7	39.5	38.2	36.9	35.6
82.5°	24.2	24.2	24.2	24.2	24.2
85°	12.7	14.0	15.3	16.6	17.8
87.5°	7.6	7.6	8.9	10.2	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)