

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: P560451

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560451
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-81-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2142.0 lumens
Efficiency: N/A
Efficacy: 91.5 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

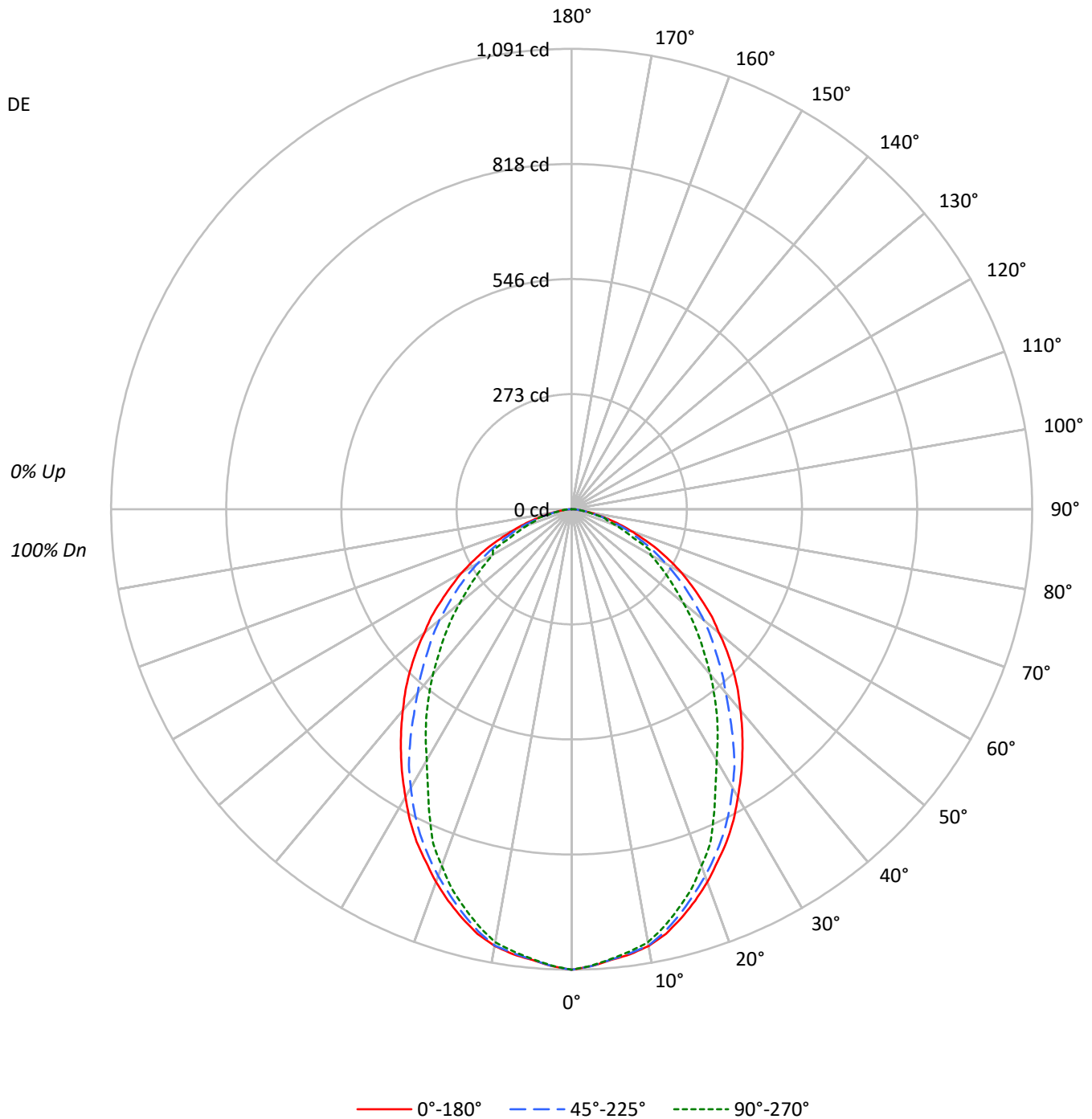
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5872	5872	5872
5°	5793	5786	5779
10°	5742	5735	5694
15°	5587	5531	5454
20°	5382	5296	5151
25°	5161	5049	4734
30°	4891	4735	4264
35°	4633	4376	3945
40°	4369	3988	3589
45°	4118	3687	3245
50°	3813	3422	2894
55°	3527	3101	2592
60°	3231	2770	2322
65°	2844	2426	2057
70°	2341	2124	1747
75°	1863	1626	1705
80°	1252	1172	1094
85°	778	932	1093

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4118 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.6	4.7
10°-20°	278.7	13.0
20°-30°	385.9	18.0
30°-40°	411.5	19.2
40°-50°	375.4	17.5
50°-60°	294.1	13.7
60°-70°	191.7	8.9
70°-80°	84.9	4.0
80°-90°	18.2	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°	766.2	35.8
0°-40°	1177.7	55.0
0°-60°	1847.2	86.2
0°-90°	2142.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2142.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1091	1091	1091	1091	1091	
5°	1072	1071	1071	1070	1070	102
15°	1003	1003	993	983	979	282
25°	869	864	850	820	797	399
35°	705	700	666	616	600	441
45°	541	530	484	444	426	417
55°	376	364	330	291	276	337
65°	223	211	190	194	162	220
75°	90	83	78	74	82	96
85°	13	14	15	16	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1091.1	1091.1	1091.1	1091.1	1091.1
2.5°	1083.5	1083.5	1083.5	1082.3	1082.3
5°	1072.2	1070.9	1070.9	1069.7	1069.7
7.5°	1063.4	1062.1	1060.8	1059.6	1057.0
10°	1050.7	1050.7	1049.5	1043.2	1041.9
12.5°	1030.6	1029.3	1024.3	1015.4	1012.9
15°	1002.8	1002.8	992.7	982.6	978.8
17.5°	972.5	971.3	958.7	948.6	943.5
20°	939.7	937.2	924.6	908.2	899.4
22.5°	903.2	903.2	888.0	866.6	857.7
25°	869.1	864.1	850.2	819.9	797.2
27.5°	830.0	822.4	807.3	764.4	737.9
30°	787.1	783.3	761.9	706.4	686.2
32.5°	746.7	740.4	717.7	659.7	643.3
35°	705.1	700.1	666.0	615.6	600.4
37.5°	663.5	657.2	614.3	573.9	555.0
40°	621.9	614.3	567.6	531.0	510.9
42.5°	582.8	572.7	527.3	488.2	465.5
45°	541.1	529.8	484.4	444.0	426.4
47.5°	499.5	489.4	447.8	406.2	386.0
50°	455.4	446.5	408.7	367.1	345.6
52.5°	418.8	404.9	368.3	326.7	309.0
55°	375.9	364.5	330.5	291.4	276.2
57.5°	336.8	325.4	293.9	257.3	244.7
60°	300.2	283.8	257.3	225.8	215.7
62.5°	259.8	247.2	224.5	198.0	210.7
65°	223.3	210.7	190.5	194.3	161.5
67.5°	182.9	176.6	158.9	141.3	136.2
70°	148.8	141.3	135.0	116.0	111.0
72.5°	118.6	111.0	102.2	92.1	88.3
75°	89.6	83.3	78.2	74.4	82.0
77.5°	61.8	59.3	55.5	51.7	50.5
80°	40.4	39.1	37.8	36.6	35.3
82.5°	24.0	24.0	24.0	24.0	24.0
85°	12.6	13.9	15.1	16.4	17.7
87.5°	7.6	7.6	8.8	10.1	11.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)