

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: P559723

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559723
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-LD4-1HI-40-UNV-93-94-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1898.0 lumens
Efficiency: N/A
Efficacy: 87.9 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

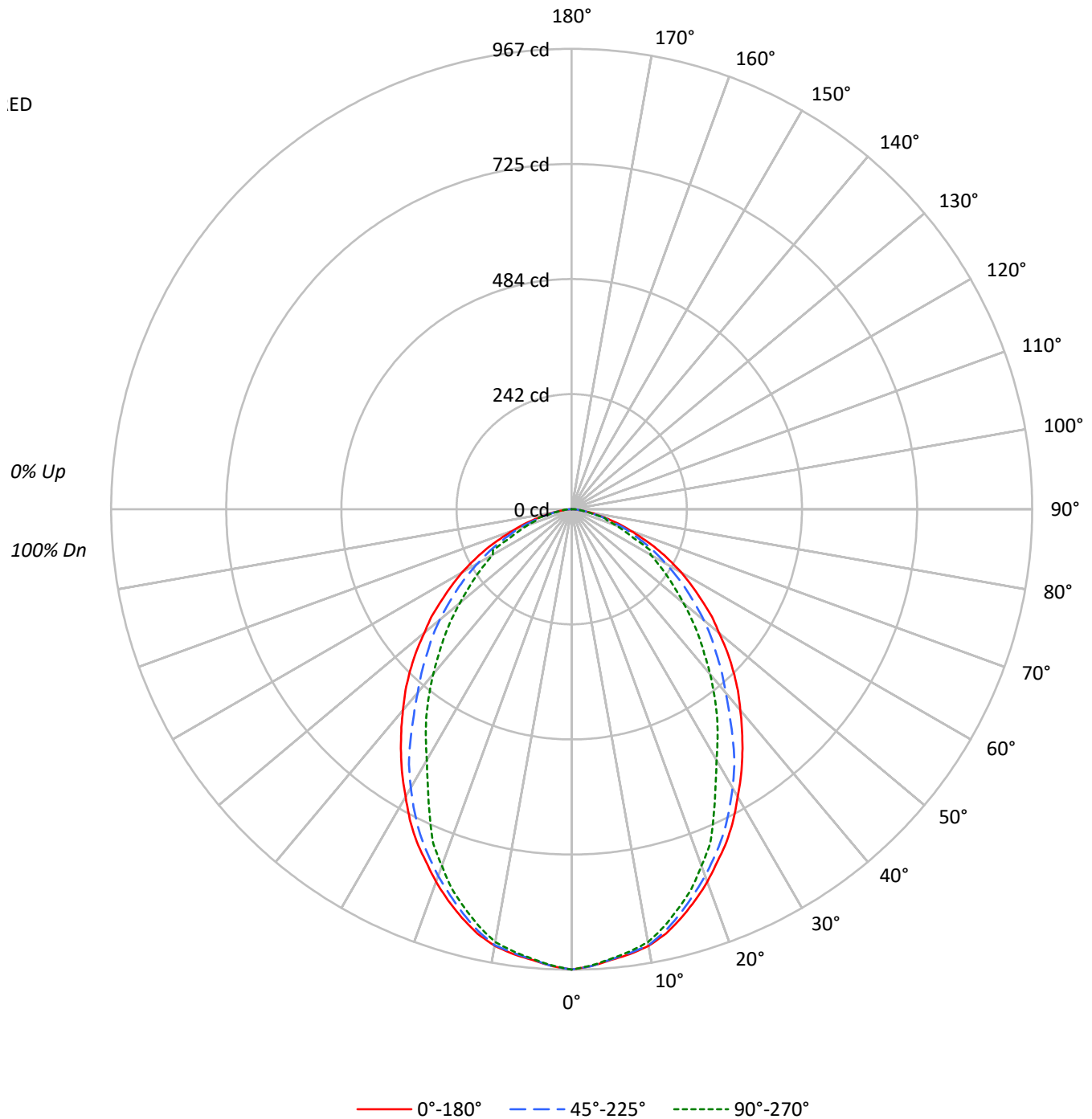
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5203	5203	5203
5°	5133	5126	5121
10°	5088	5082	5045
15°	4951	4901	4832
20°	4769	4692	4564
25°	4573	4473	4195
30°	4334	4195	3778
35°	4105	3877	3495
40°	3871	3534	3181
45°	3650	3267	2876
50°	3378	3032	2565
55°	3126	2747	2297
60°	2863	2454	2057
65°	2519	2150	1822
70°	2076	1882	1548
75°	1651	1441	1512
80°	1110	1038	970
85°	692	827	963

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3650 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	4.7
10°-20°	247.0	13.0
20°-30°	341.9	18.0
30°-40°	364.6	19.2
40°-50°	332.6	17.5
50°-60°	260.6	13.7
60°-70°	169.8	8.9
70°-80°	75.2	4.0
80°-90°	16.1	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°	678.9	35.8
0°-40°	1043.5	55.0
0°-60°	1636.8	86.2
0°-90°	1898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	967	967	967	967	967	
5°	950	949	949	948	948	90
15°	889	889	880	871	867	250
25°	770	766	753	726	706	354
35°	625	620	590	545	532	391
45°	480	469	429	393	378	369
55°	333	323	293	258	245	299
65°	198	187	169	172	143	195
75°	79	74	69	66	73	85
85°	11	12	13	14	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	966.8	966.8	966.8	966.8	966.8
2.5°	960.1	960.1	960.1	959.0	959.0
5°	950.1	948.9	948.9	947.8	947.8
7.5°	942.2	941.1	940.0	938.9	936.6
10°	931.0	931.0	929.9	924.3	923.2
12.5°	913.2	912.0	907.6	899.8	897.5
15°	888.6	888.6	879.6	870.7	867.3
17.5°	861.8	860.6	849.5	840.5	836.0
20°	832.7	830.5	819.3	804.7	796.9
22.5°	800.3	800.3	786.9	767.9	760.0
25°	770.1	765.6	753.3	726.5	706.4
27.5°	735.5	728.7	715.3	677.3	653.9
30°	697.4	694.1	675.1	625.9	608.0
32.5°	661.7	656.1	636.0	584.6	570.0
35°	624.8	620.3	590.1	545.4	532.0
37.5°	587.9	582.3	544.3	508.6	491.8
40°	551.0	544.3	503.0	470.6	452.7
42.5°	516.4	507.4	467.2	432.6	412.4
45°	479.5	469.4	429.2	393.4	377.8
47.5°	442.6	433.7	396.8	359.9	342.0
50°	403.5	395.7	362.1	325.3	306.3
52.5°	371.1	358.8	326.4	289.5	273.8
55°	333.1	323.0	292.8	258.2	244.8
57.5°	298.4	288.4	260.4	228.0	216.8
60°	266.0	251.5	228.0	200.1	191.1
62.5°	230.2	219.1	199.0	175.5	186.7
65°	197.8	186.7	168.8	172.1	143.1
67.5°	162.1	156.5	140.8	125.2	120.7
70°	131.9	125.2	119.6	102.8	98.4
72.5°	105.1	98.4	90.5	81.6	78.2
75°	79.4	73.8	69.3	65.9	72.7
77.5°	54.8	52.5	49.2	45.8	44.7
80°	35.8	34.6	33.5	32.4	31.3
82.5°	21.2	21.2	21.2	21.2	21.2
85°	11.2	12.3	13.4	14.5	15.6
87.5°	6.7	6.7	7.8	8.9	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)