

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: P559636

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559636
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-35-UNV-82-86-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1411.0 lumens
Efficiency: N/A
Efficacy: 65.3 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

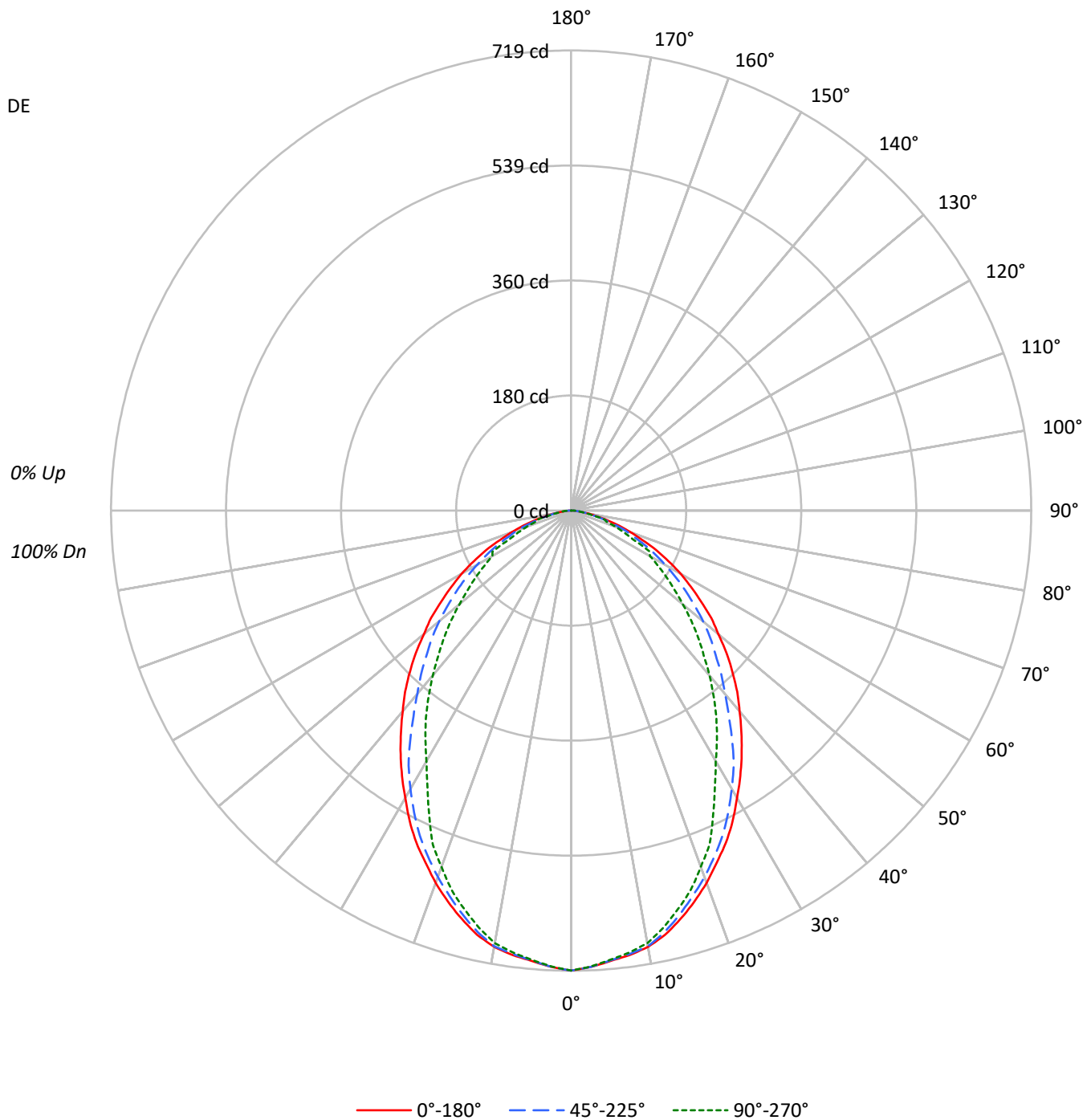
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3868	3868	3868
5°	3816	3811	3807
10°	3783	3778	3751
15°	3681	3643	3593
20°	3545	3489	3393
25°	3400	3325	3118
30°	3222	3119	2809
35°	3052	2882	2598
40°	2878	2627	2364
45°	2713	2429	2138
50°	2512	2254	1906
55°	2323	2043	1708
60°	2129	1824	1530
65°	1873	1598	1355
70°	1542	1399	1150
75°	1227	1071	1123
80°	824	772	722
85°	513	618	716

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2713 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.9	4.7
10°-20°	183.6	13.0
20°-30°	254.2	18.0
30°-40°	271.1	19.2
40°-50°	247.3	17.5
50°-60°	193.7	13.7
60°-70°	126.3	8.9
70°-80°	55.9	4.0
80°-90°	12.0	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°	504.7	35.8
0°-40°	775.8	55.0
0°-60°	1216.8	86.2
0°-90°	1411.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1411.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	706	705	705	705	705	67
15°	661	661	654	647	645	186
25°	572	569	560	540	525	263
35°	464	461	439	406	396	290
45°	356	349	319	292	281	275
55°	248	240	218	192	182	222
65°	147	139	126	128	106	145
75°	59	55	52	49	54	63
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.7	718.7	718.7	718.7	718.7
2.5°	713.8	713.8	713.8	712.9	712.9
5°	706.3	705.4	705.4	704.6	704.6
7.5°	700.5	699.6	698.8	698.0	696.3
10°	692.2	692.2	691.3	687.2	686.3
12.5°	678.9	678.0	674.7	668.9	667.2
15°	660.6	660.6	653.9	647.3	644.8
17.5°	640.6	639.8	631.5	624.9	621.5
20°	619.0	617.4	609.1	598.3	592.4
22.5°	594.9	594.9	585.0	570.8	565.0
25°	572.5	569.2	560.0	540.1	525.1
27.5°	546.7	541.8	531.8	503.5	486.1
30°	518.5	516.0	501.9	465.3	452.0
32.5°	491.9	487.7	472.8	434.6	423.8
35°	464.5	461.2	438.7	405.5	395.5
37.5°	437.1	432.9	404.7	378.1	365.6
40°	409.6	404.7	373.9	349.8	336.5
42.5°	383.9	377.2	347.3	321.6	306.6
45°	356.5	349.0	319.1	292.5	280.9
47.5°	329.0	322.4	295.0	267.6	254.3
50°	300.0	294.1	269.2	241.8	227.7
52.5°	275.9	266.7	242.6	215.2	203.6
55°	247.6	240.1	217.7	191.9	182.0
57.5°	221.9	214.4	193.6	169.5	161.2
60°	197.8	187.0	169.5	148.7	142.1
62.5°	171.2	162.9	147.9	130.5	138.8
65°	147.1	138.8	125.5	128.0	106.4
67.5°	120.5	116.3	104.7	93.1	89.7
70°	98.0	93.1	88.9	76.4	73.1
72.5°	78.1	73.1	67.3	60.7	58.2
75°	59.0	54.8	51.5	49.0	54.0
77.5°	40.7	39.1	36.6	34.1	33.2
80°	26.6	25.8	24.9	24.1	23.3
82.5°	15.8	15.8	15.8	15.8	15.8
85°	8.3	9.1	10.0	10.8	11.6
87.5°	5.0	5.0	5.8	6.6	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)