

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: P559686

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559686
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-81-87-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1414.0 lumens
Efficiency: N/A
Efficacy: 65.5 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

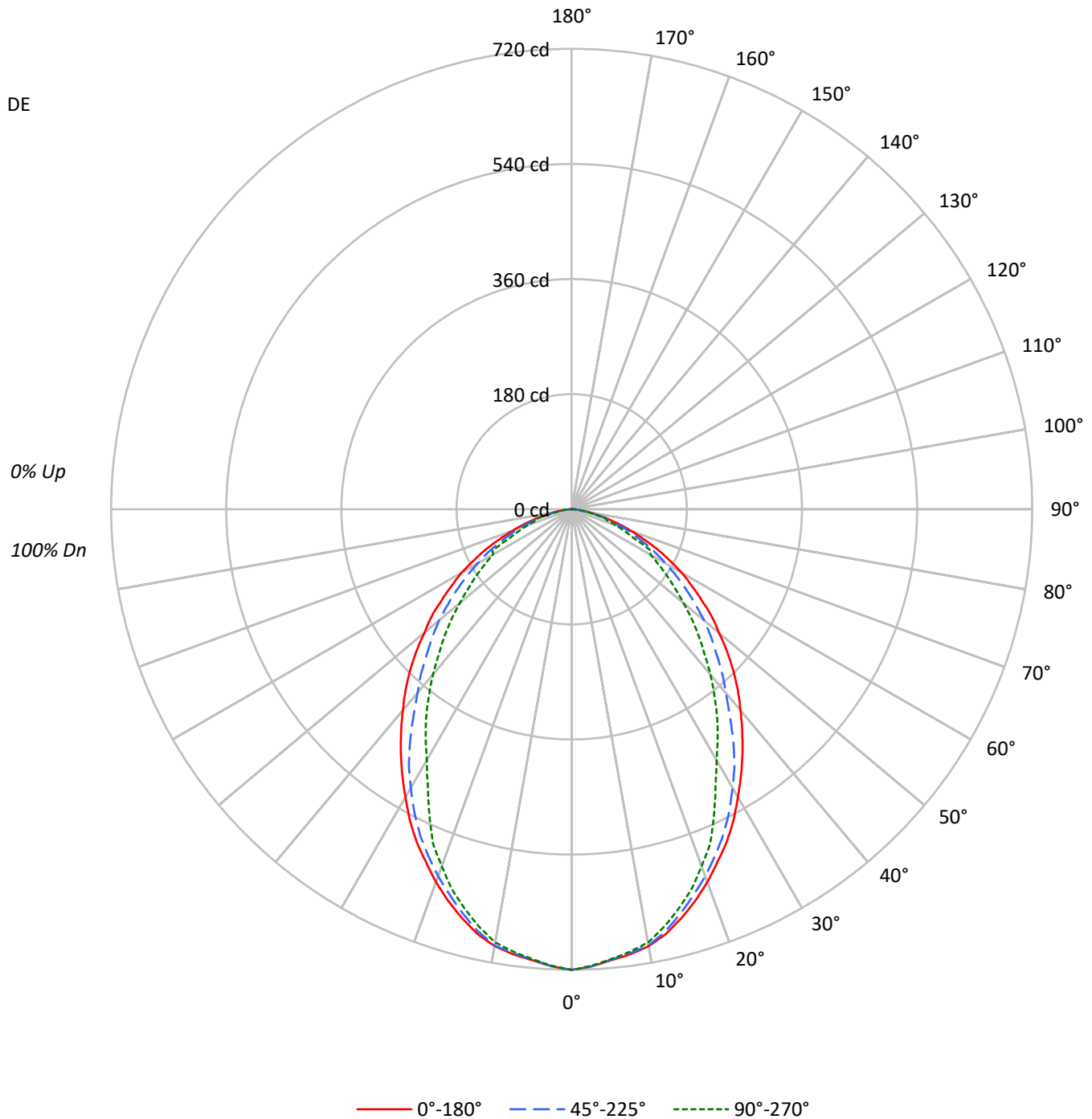
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3877	3877	3877
5°	3824	3819	3815
10°	3791	3786	3759
15°	3689	3651	3601
20°	3553	3496	3400
25°	3407	3333	3125
30°	3229	3125	2815
35°	3058	2889	2604
40°	2884	2633	2369
45°	2719	2434	2142
50°	2517	2259	1911
55°	2328	2047	1711
60°	2133	1829	1533
65°	1877	1601	1358
70°	1547	1402	1153
75°	1229	1073	1125
80°	824	775	722
85°	513	618	722

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2719 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	4.7
10°-20°	184.0	13.0
20°-30°	254.7	18.0
30°-40°	271.6	19.2
40°-50°	247.8	17.5
50°-60°	194.1	13.7
60°-70°	126.5	8.9
70°-80°	56.0	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°	505.8	35.8
0°-40°	777.4	55.0
0°-60°	1219.4	86.2
0°-90°	1414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	708	707	707	706	706	67
15°	662	662	655	649	646	186
25°	574	570	561	541	526	263
35°	466	462	440	406	396	291
45°	357	350	320	293	281	275
55°	248	241	218	192	182	223
65°	147	139	126	128	107	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°	720.3	720.3	720.3	720.3	720.3
2.5°	715.3	715.3	715.3	714.4	714.4
5°	707.8	706.9	706.9	706.1	706.1
7.5°	702.0	701.1	700.3	699.5	697.8
10°	693.6	693.6	692.8	688.6	687.8
12.5°	680.3	679.5	676.1	670.3	668.6
15°	662.0	662.0	655.3	648.7	646.2
17.5°	642.0	641.2	632.8	626.2	622.8
20°	620.4	618.7	610.4	599.5	593.7
22.5°	596.2	596.2	586.2	572.1	566.2
25°	573.7	570.4	561.2	541.2	526.3
27.5°	547.9	542.9	532.9	504.6	487.1
30°	519.6	517.1	502.9	466.3	453.0
32.5°	492.9	488.8	473.8	435.5	424.7
35°	465.5	462.1	439.7	406.4	396.4
37.5°	438.0	433.8	405.5	378.9	366.4
40°	410.5	405.5	374.7	350.6	337.2
42.5°	384.7	378.0	348.1	322.2	307.3
45°	357.2	349.7	319.8	293.1	281.4
47.5°	329.7	323.1	295.6	268.1	254.8
50°	300.6	294.8	269.8	242.3	228.2
52.5°	276.5	267.3	243.1	215.7	204.0
55°	248.1	240.6	218.2	192.4	182.4
57.5°	222.3	214.8	194.0	169.9	161.5
60°	198.2	187.4	169.9	149.1	142.4
62.5°	171.5	163.2	148.2	130.7	139.1
65°	147.4	139.1	125.7	128.2	106.6
67.5°	120.7	116.6	104.9	93.3	89.9
70°	98.3	93.3	89.1	76.6	73.3
72.5°	78.3	73.3	67.4	60.8	58.3
75°	59.1	55.0	51.6	49.1	54.1
77.5°	40.8	39.1	36.6	34.1	33.3
80°	26.6	25.8	25.0	24.1	23.3
82.5°	15.8	15.8	15.8	15.8	15.8
85°	8.3	9.2	10.0	10.8	11.7
87.5°	5.0	5.0	5.8	6.7	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)