

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: P560008

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560008
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-LD4-1STD-35-UNV-81-88-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1024.0 lumens
Efficiency: N/A
Efficacy: 61.7 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

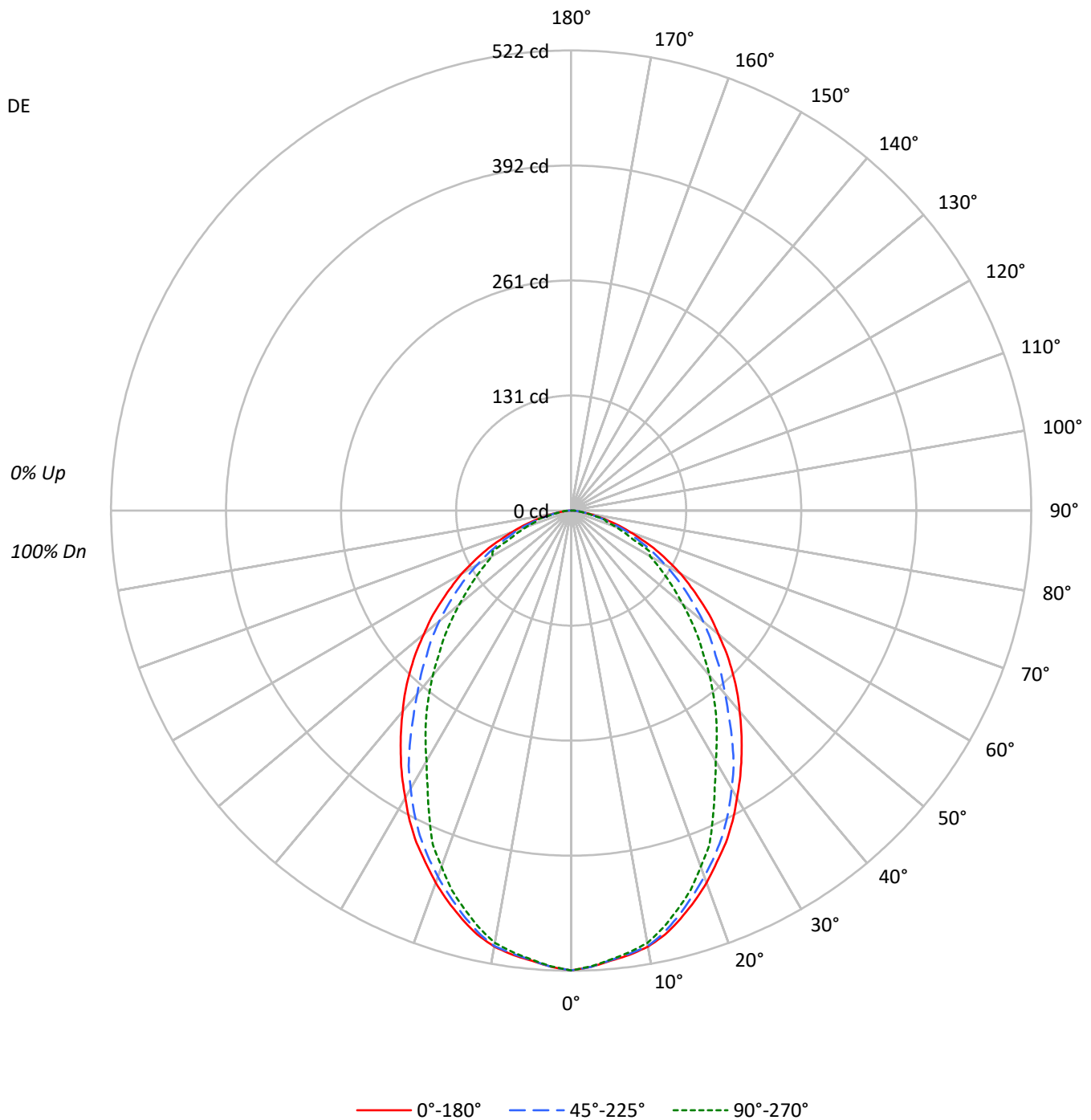
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2807	2807	2807
5°	2769	2766	2763
10°	2745	2742	2722
15°	2671	2644	2607
20°	2573	2531	2463
25°	2467	2413	2263
30°	2339	2263	2038
35°	2215	2092	1886
40°	2089	1907	1716
45°	1969	1763	1551
50°	1823	1636	1383
55°	1686	1483	1240
60°	1545	1324	1110
65°	1359	1160	983
70°	1120	1015	836
75°	890	778	815
80°	598	561	524
85°	371	445	519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1969 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.6	4.7
10°-20°	133.3	13.0
20°-30°	184.5	18.0
30°-40°	196.7	19.2
40°-50°	179.5	17.5
50°-60°	140.6	13.7
60°-70°	91.6	8.9
70°-80°	40.6	4.0
80°-90°	8.7	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°	366.3	35.8
0°-40°	563.0	55.0
0°-60°	883.1	86.2
0°-90°	1024.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1024.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	522	522	522	522	522	
5°	513	512	512	511	511	49
15°	479	479	475	470	468	135
25°	416	413	406	392	381	191
35°	337	335	318	294	287	211
45°	259	253	232	212	204	199
55°	180	174	158	139	132	161
65°	107	101	91	93	77	105
75°	43	40	37	36	39	46
85°	6	7	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	521.6	521.6	521.6	521.6	521.6
2.5°	518.0	518.0	518.0	517.4	517.4
5°	512.6	512.0	512.0	511.4	511.4
7.5°	508.3	507.7	507.1	506.5	505.3
10°	502.3	502.3	501.7	498.7	498.1
12.5°	492.7	492.1	489.7	485.4	484.2
15°	479.4	479.4	474.6	469.8	467.9
17.5°	464.9	464.3	458.3	453.5	451.1
20°	449.2	448.0	442.0	434.2	430.0
22.5°	431.8	431.8	424.5	414.3	410.1
25°	415.5	413.1	406.4	392.0	381.1
27.5°	396.8	393.2	385.9	365.4	352.8
30°	376.3	374.5	364.2	337.7	328.0
32.5°	357.0	354.0	343.1	315.4	307.5
35°	337.1	334.7	318.4	294.3	287.0
37.5°	317.2	314.2	293.7	274.4	265.3
40°	297.3	293.7	271.4	253.9	244.2
42.5°	278.6	273.8	252.1	233.4	222.5
45°	258.7	253.3	231.6	212.3	203.8
47.5°	238.8	234.0	214.1	194.2	184.5
50°	217.7	213.5	195.4	175.5	165.2
52.5°	200.2	193.6	176.1	156.2	147.7
55°	179.7	174.3	158.0	139.3	132.1
57.5°	161.0	155.6	140.5	123.0	117.0
60°	143.5	135.7	123.0	107.9	103.1
62.5°	124.2	118.2	107.3	94.7	100.7
65°	106.7	100.7	91.1	92.9	77.2
67.5°	87.4	84.4	76.0	67.5	65.1
70°	71.2	67.5	64.5	55.5	53.1
72.5°	56.7	53.1	48.8	44.0	42.2
75°	42.8	39.8	37.4	35.6	39.2
77.5°	29.5	28.3	26.5	24.7	24.1
80°	19.3	18.7	18.1	17.5	16.9
82.5°	11.5	11.5	11.5	11.5	11.5
85°	6.0	6.6	7.2	7.8	8.4
87.5°	3.6	3.6	4.2	4.8	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)