

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: P590109

Luminaire Tested: FSR-24-2-LD4-1STD-50-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590109
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1STD-50-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1904.0 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

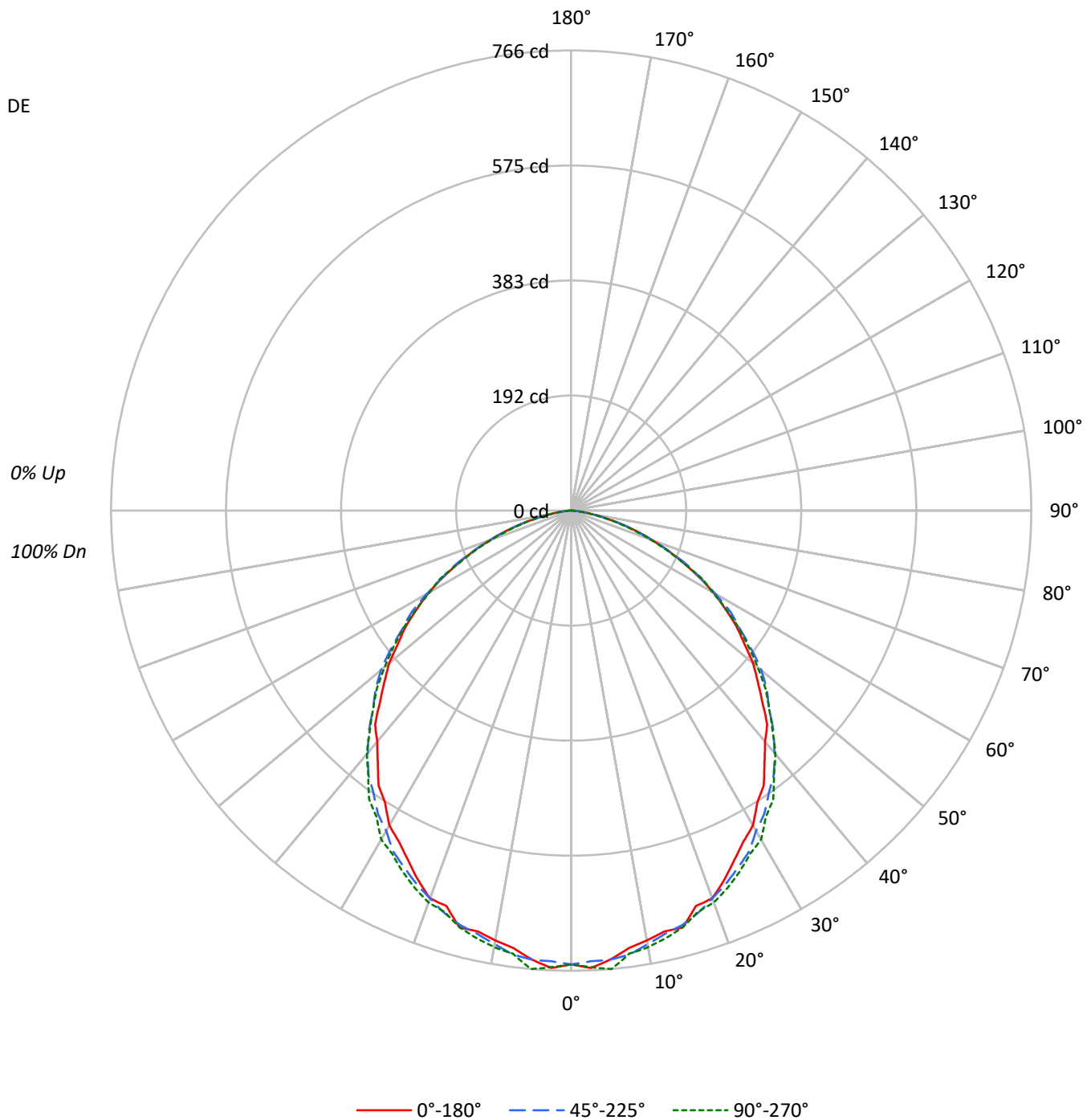
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2033	2033	2033
5°	2026	2027	2070
10°	1985	2002	2017
15°	2001	1990	2001
20°	1967	1967	1988
25°	1907	1948	1970
30°	1880	1913	1964
35°	1836	1884	1926
40°	1764	1850	1858
45°	1711	1772	1775
50°	1655	1730	1697
55°	1577	1608	1596
60°	1475	1489	1463
65°	1315	1349	1305
70°	1128	1132	1101
75°	893	891	857
80°	598	583	559
85°	324	321	303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1818 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.1	3.7
10°-20°	201.4	10.6
20°-30°	301.7	15.8
30°-40°	357.6	18.8
40°-50°	358.3	18.8
50°-60°	304.1	16.0
60°-70°	205.0	10.8
70°-80°	90.1	4.7
80°-90°	14.6	0.8
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°	574.2	30.2
0°-40°	931.8	48.9
0°-60°	1594.2	83.7
0°-90°	1904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1904.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	750	748	750	748	766	71
15°	718	710	714	718	718	200
25°	642	646	656	665	663	297
35°	559	561	574	587	586	347
45°	450	458	466	478	466	348
55°	336	334	343	340	340	299
65°	206	204	212	204	205	205
75°	86	84	86	80	82	92
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	755.5	755.5	755.5	755.5	755.5
2.5°	762.0	756.2	750.9	757.1	760.9
5°	750.1	748.3	750.4	748.1	766.2
7.5°	734.7	741.4	745.3	742.9	743.9
10°	726.5	724.1	732.8	738.9	738.0
12.5°	717.7	721.2	721.7	728.2	728.8
15°	718.2	709.9	714.3	718.0	718.3
17.5°	690.3	699.3	702.3	710.8	700.3
20°	686.9	680.4	686.9	695.6	694.2
22.5°	665.9	658.6	672.6	680.4	679.9
25°	642.1	645.6	656.2	664.7	663.4
27.5°	621.2	625.3	640.4	652.2	644.6
30°	605.1	603.1	615.8	626.3	632.2
32.5°	576.4	583.8	598.6	609.0	603.5
35°	558.9	560.6	573.5	586.8	586.4
37.5°	528.4	536.1	554.3	558.0	554.6
40°	502.3	510.0	526.5	530.5	528.9
42.5°	483.1	484.5	498.6	503.2	495.9
45°	449.7	458.1	465.7	477.7	466.3
47.5°	421.2	425.1	441.5	444.7	438.7
50°	395.3	396.7	413.2	409.2	405.3
52.5°	362.9	368.6	377.9	377.1	372.5
55°	336.1	333.9	342.7	340.3	340.2
57.5°	304.0	307.9	315.2	311.5	305.5
60°	274.0	274.1	276.7	272.5	271.8
62.5°	240.5	241.7	242.3	237.1	245.5
65°	206.5	203.8	211.8	203.7	205.0
67.5°	175.2	176.6	175.8	170.7	172.6
70°	143.4	145.1	143.9	138.1	139.9
72.5°	114.3	112.2	113.5	106.3	109.6
75°	85.9	84.2	85.7	79.7	82.4
77.5°	58.5	59.9	58.9	55.7	57.5
80°	38.6	37.6	37.6	35.7	36.1
82.5°	22.5	21.5	21.2	20.6	21.5
85°	10.5	10.2	10.4	10.1	9.8
87.5°	3.8	3.9	3.9	3.7	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)