

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: P562689

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562689
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-24-4-LD4-2LO-35-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5537.0 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

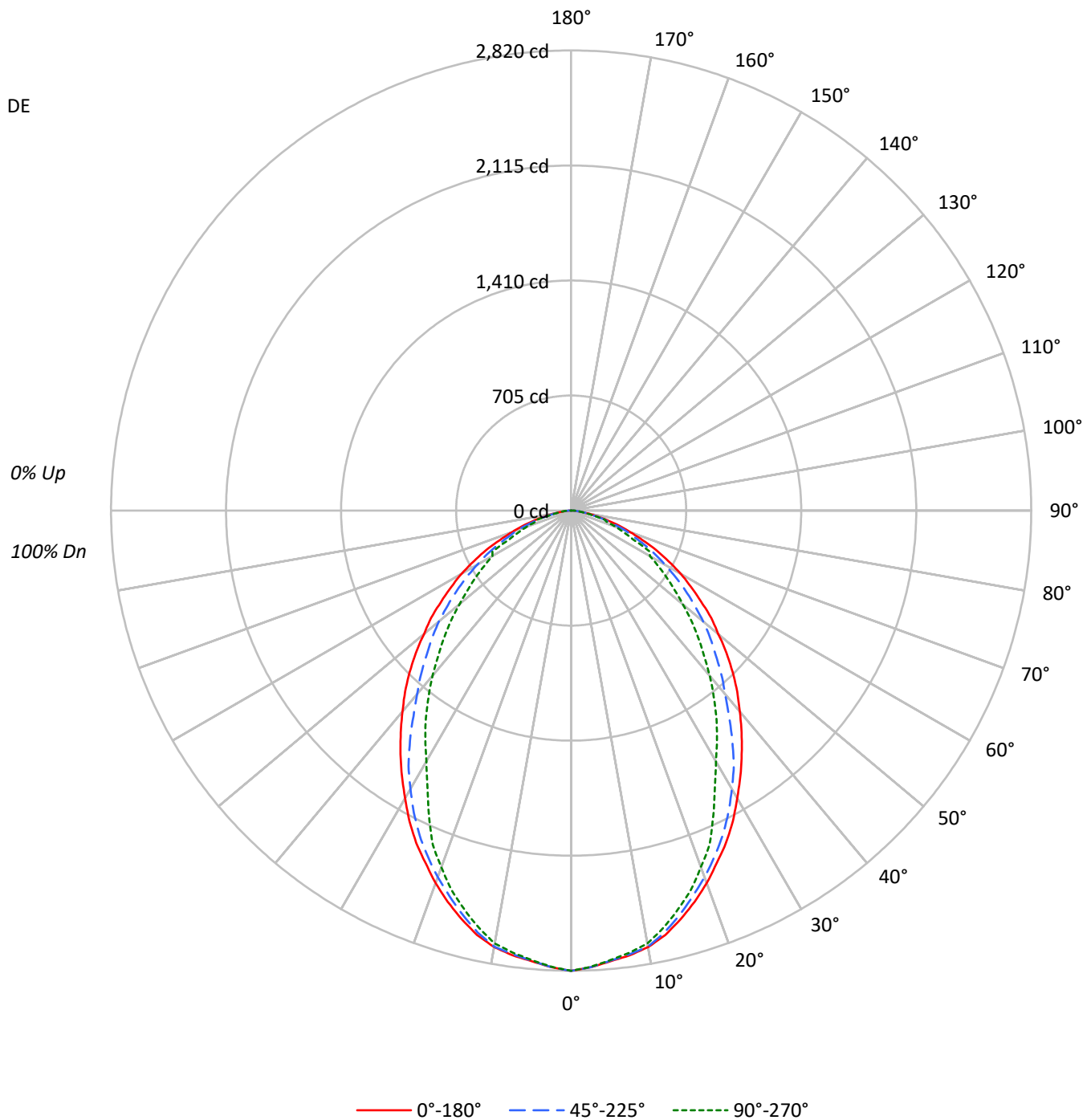
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3795	3795	3795
5°	3743	3739	3734
10°	3711	3706	3680
15°	3611	3574	3525
20°	3478	3422	3329
25°	3335	3263	3059
30°	3161	3060	2756
35°	2994	2828	2549
40°	2823	2577	2320
45°	2662	2383	2097
50°	2464	2211	1870
55°	2279	2004	1675
60°	2088	1790	1500
65°	1837	1568	1329
70°	1514	1373	1129
75°	1203	1051	1102
80°	808	758	707
85°	503	604	704

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2662 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.5	4.7
10°-20°	720.5	13.0
20°-30°	997.5	18.0
30°-40°	1063.7	19.2
40°-50°	970.4	17.5
50°-60°	760.2	13.7
60°-70°	495.5	8.9
70°-80°	219.5	4.0
80°-90°	47.1	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°	1980.6	35.8
0°-40°	3044.3	55.0
0°-60°	4774.9	86.2
0°-90°	5537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5537.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2820	2820	2820	2820	2820	
5°	2772	2768	2768	2765	2765	263
15°	2592	2592	2566	2540	2530	729
25°	2247	2234	2198	2119	2061	1031
35°	1823	1810	1722	1591	1552	1140
45°	1399	1370	1252	1148	1102	1077
55°	972	942	854	753	714	872
65°	577	544	492	502	417	569
75°	232	215	202	192	212	248
85°	33	36	39	42	46	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2820.5	2820.5	2820.5	2820.5	2820.5
2.5°	2800.9	2800.9	2800.9	2797.6	2797.6
5°	2771.6	2768.3	2768.3	2765.0	2765.0
7.5°	2748.7	2745.5	2742.2	2739.0	2732.4
10°	2716.1	2716.1	2712.9	2696.6	2693.3
12.5°	2664.0	2660.7	2647.7	2624.8	2618.3
15°	2592.2	2592.2	2566.1	2540.1	2530.3
17.5°	2514.0	2510.7	2478.1	2452.0	2439.0
20°	2429.2	2422.7	2390.1	2347.7	2324.9
22.5°	2334.6	2334.6	2295.5	2240.1	2217.3
25°	2246.6	2233.6	2197.7	2119.4	2060.7
27.5°	2145.5	2126.0	2086.8	1976.0	1907.5
30°	2034.7	2024.9	1969.4	1826.0	1773.8
32.5°	1930.3	1914.0	1855.3	1705.3	1662.9
35°	1822.7	1809.7	1721.6	1591.2	1552.1
37.5°	1715.1	1698.8	1587.9	1483.6	1434.7
40°	1607.5	1587.9	1467.3	1372.7	1320.6
42.5°	1506.4	1480.3	1363.0	1261.9	1203.2
45°	1398.8	1369.5	1252.1	1147.8	1102.1
47.5°	1291.2	1265.1	1157.5	1049.9	997.8
50°	1177.1	1154.3	1056.5	948.9	893.4
52.5°	1082.5	1046.7	952.1	844.5	798.9
55°	971.7	942.3	854.3	753.2	714.1
57.5°	870.6	841.3	759.7	665.2	632.6
60°	776.0	733.6	665.2	583.7	557.6
62.5°	671.7	639.1	580.4	511.9	544.5
65°	577.1	544.5	492.4	502.1	417.4
67.5°	472.8	456.5	410.8	365.2	352.2
70°	384.8	365.2	348.9	300.0	286.9
72.5°	306.5	286.9	264.1	238.0	228.2
75°	231.5	215.2	202.2	192.4	211.9
77.5°	159.8	153.3	143.5	133.7	130.4
80°	104.3	101.1	97.8	94.6	91.3
82.5°	62.0	62.0	62.0	62.0	62.0
85°	32.6	35.9	39.1	42.4	45.6
87.5°	19.6	19.6	22.8	26.1	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)