

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: P562691

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562691
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-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5427.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

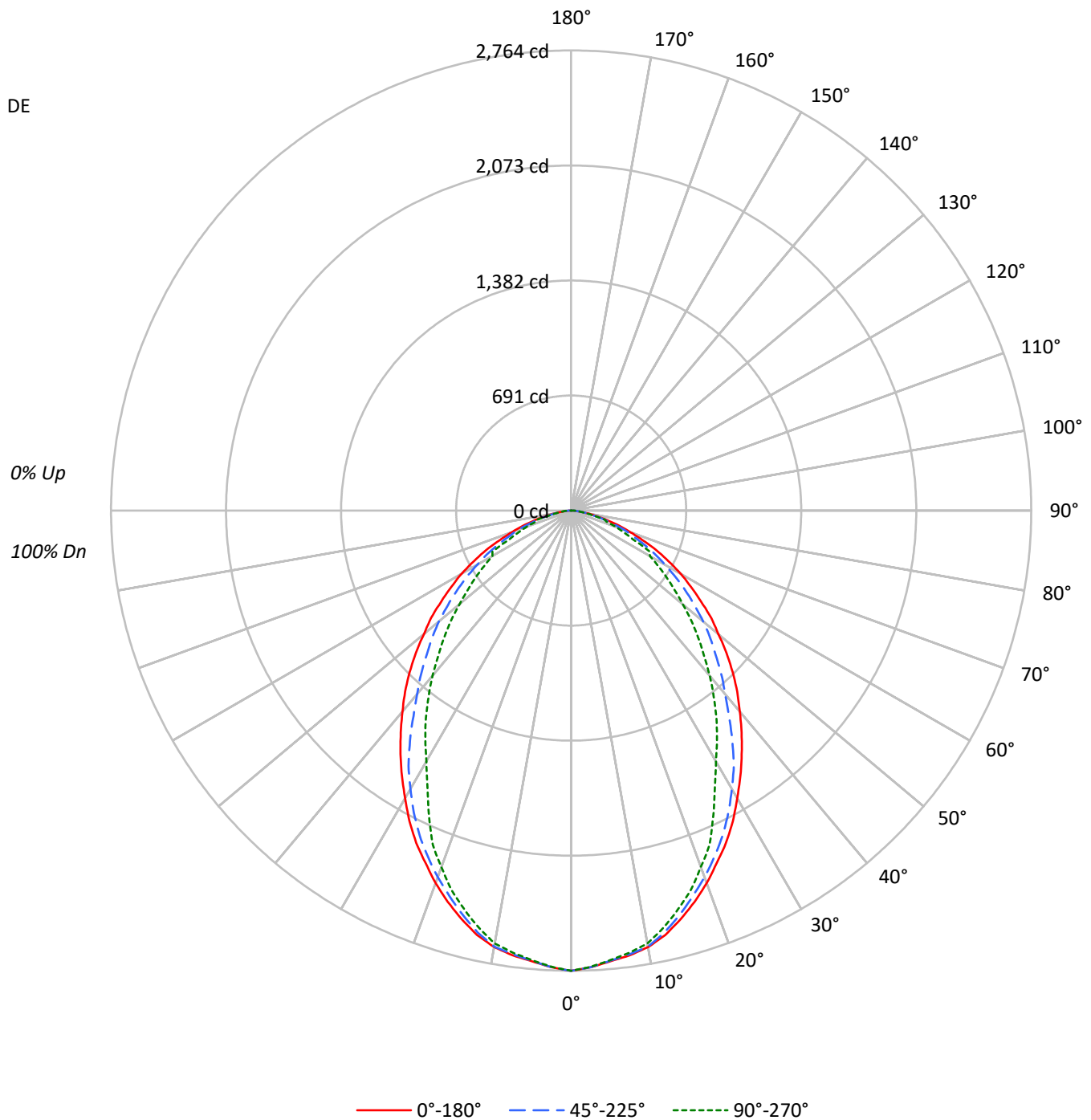
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3719	3719	3719
5°	3669	3665	3660
10°	3637	3633	3607
15°	3539	3504	3455
20°	3409	3354	3263
25°	3269	3198	2999
30°	3098	2999	2701
35°	2934	2772	2499
40°	2767	2526	2273
45°	2609	2335	2055
50°	2415	2168	1833
55°	2234	1964	1642
60°	2047	1755	1471
65°	1801	1536	1302
70°	1483	1345	1106
75°	1180	1030	1080
80°	793	743	693
85°	494	593	690

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2609 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.3	4.7
10°-20°	706.2	13.0
20°-30°	977.7	18.0
30°-40°	1042.5	19.2
40°-50°	951.1	17.5
50°-60°	745.1	13.7
60°-70°	485.6	8.9
70°-80°	215.1	4.0
80°-90°	46.2	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°	1941.3	35.8
0°-40°	2983.8	55.0
0°-60°	4680.0	86.2
0°-90°	5427.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5427.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2764	2764	2764	2764	2764	
5°	2716	2713	2713	2710	2710	258
15°	2541	2541	2515	2490	2480	714
25°	2202	2189	2154	2077	2020	1011
35°	1786	1774	1687	1560	1521	1117
45°	1371	1342	1227	1125	1080	1056
55°	952	924	837	738	700	854
65°	566	534	483	492	409	557
75°	227	211	198	189	208	243
85°	32	35	38	42	45	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2764.4	2764.4	2764.4	2764.4	2764.4
2.5°	2745.3	2745.3	2745.3	2742.1	2742.1
5°	2716.5	2713.3	2713.3	2710.1	2710.1
7.5°	2694.1	2690.9	2687.7	2684.5	2678.2
10°	2662.2	2662.2	2659.0	2643.0	2639.8
12.5°	2611.0	2607.8	2595.1	2572.7	2566.3
15°	2540.7	2540.7	2515.2	2489.6	2480.0
17.5°	2464.0	2460.8	2428.9	2403.3	2390.5
20°	2380.9	2374.5	2342.6	2301.0	2278.7
22.5°	2288.3	2288.3	2249.9	2195.6	2173.2
25°	2202.0	2189.2	2154.0	2077.3	2019.8
27.5°	2102.9	2083.7	2045.4	1936.7	1869.6
30°	1994.2	1984.6	1930.3	1789.7	1738.6
32.5°	1892.0	1876.0	1818.5	1671.4	1629.9
35°	1786.5	1773.7	1687.4	1559.6	1521.2
37.5°	1681.0	1665.1	1556.4	1454.1	1406.2
40°	1575.6	1556.4	1438.1	1345.5	1294.3
42.5°	1476.5	1450.9	1335.9	1236.8	1179.3
45°	1371.0	1342.3	1227.2	1125.0	1080.2
47.5°	1265.6	1240.0	1134.5	1029.1	977.9
50°	1153.7	1131.3	1035.5	930.0	875.7
52.5°	1061.0	1025.9	933.2	827.7	783.0
55°	952.4	923.6	837.3	738.2	699.9
57.5°	853.3	824.5	744.6	652.0	620.0
60°	760.6	719.1	652.0	572.1	546.5
62.5°	658.4	626.4	568.9	501.8	533.7
65°	565.7	533.7	482.6	492.2	409.1
67.5°	463.4	447.4	402.7	357.9	345.2
70°	377.1	357.9	342.0	294.0	281.2
72.5°	300.4	281.2	258.9	233.3	223.7
75°	226.9	210.9	198.1	188.6	207.7
77.5°	156.6	150.2	140.6	131.0	127.8
80°	102.3	99.1	95.9	92.7	89.5
82.5°	60.7	60.7	60.7	60.7	60.7
85°	32.0	35.2	38.4	41.5	44.7
87.5°	19.2	19.2	22.4	25.6	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)