

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: P562155

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562155
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-LD4-1HI-50-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4938.0 lumens
Efficiency: N/A
Efficacy: 114.3 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

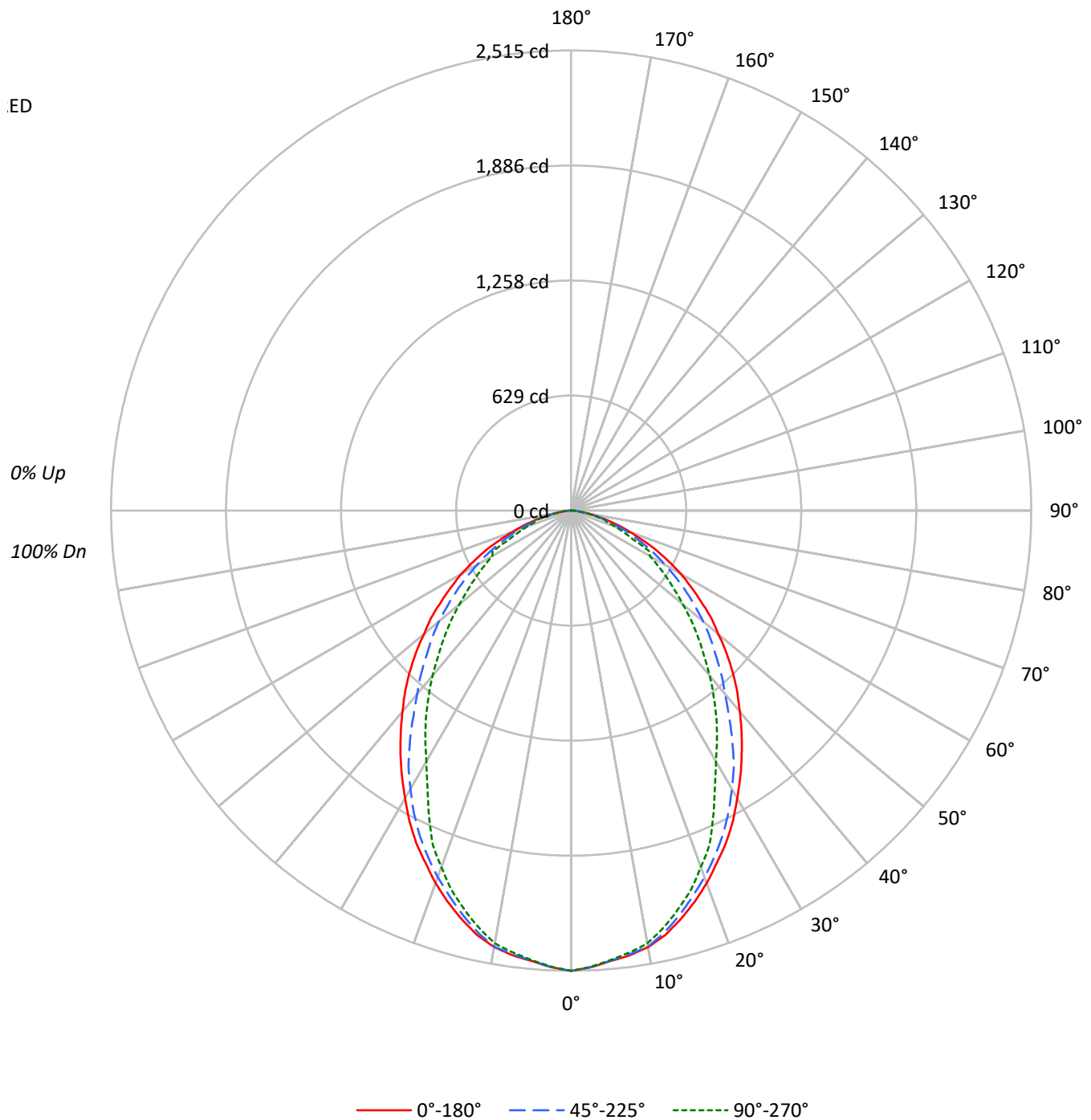
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3384	3384	3384
5°	3338	3334	3331
10°	3309	3305	3282
15°	3220	3188	3143
20°	3102	3052	2969
25°	2975	2910	2728
30°	2819	2729	2458
35°	2670	2522	2274
40°	2518	2298	2069
45°	2374	2125	1870
50°	2197	1972	1668
55°	2033	1787	1494
60°	1862	1596	1338
65°	1639	1398	1185
70°	1350	1224	1007
75°	1074	937	983
80°	721	676	631
85°	449	539	628

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2374 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.1	4.7
10°-20°	642.6	13.0
20°-30°	889.6	18.0
30°-40°	948.6	19.2
40°-50°	865.4	17.5
50°-60°	678.0	13.7
60°-70°	441.9	8.9
70°-80°	195.8	4.0
80°-90°	42.0	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°	1766.4	35.8
0°-40°	2715.0	55.0
0°-60°	4258.3	86.2
0°-90°	4938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4938.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2515	2515	2515	2515	2515	
5°	2472	2469	2469	2466	2466	235
15°	2312	2312	2288	2265	2256	650
25°	2004	1992	1960	1890	1838	920
35°	1626	1614	1535	1419	1384	1016
45°	1248	1221	1117	1024	983	961
55°	867	840	762	672	637	777
65°	515	486	439	448	372	507
75°	206	192	180	172	189	221
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2515.4	2515.4	2515.4	2515.4	2515.4
2.5°	2497.9	2497.9	2497.9	2495.0	2495.0
5°	2471.7	2468.8	2468.8	2465.9	2465.9
7.5°	2451.4	2448.5	2445.6	2442.7	2436.8
10°	2422.3	2422.3	2419.4	2404.9	2401.9
12.5°	2375.8	2372.9	2361.2	2340.9	2335.1
15°	2311.8	2311.8	2288.5	2265.3	2256.5
17.5°	2242.0	2239.1	2210.0	2186.8	2175.1
20°	2166.4	2160.6	2131.5	2093.7	2073.3
22.5°	2082.1	2082.1	2047.2	1997.7	1977.4
25°	2003.6	1991.9	1959.9	1890.1	1837.8
27.5°	1913.4	1896.0	1861.1	1762.2	1701.1
30°	1814.5	1805.8	1756.4	1628.4	1581.9
32.5°	1721.5	1706.9	1654.6	1520.8	1483.0
35°	1625.5	1613.9	1535.4	1419.1	1384.2
37.5°	1529.6	1515.0	1416.2	1323.1	1279.5
40°	1433.6	1416.2	1308.6	1224.2	1177.7
42.5°	1343.5	1320.2	1215.5	1125.4	1073.0
45°	1247.5	1221.3	1116.6	1023.6	982.9
47.5°	1151.5	1128.3	1032.3	936.4	889.8
50°	1049.8	1029.4	942.2	846.2	796.8
52.5°	965.4	933.4	849.1	753.2	712.4
55°	866.6	840.4	761.9	671.7	636.8
57.5°	776.4	750.2	677.5	593.2	564.1
60°	692.1	654.3	593.2	520.5	497.3
62.5°	599.0	570.0	517.6	456.5	485.6
65°	514.7	485.6	439.1	447.8	372.2
67.5°	421.6	407.1	366.4	325.7	314.1
70°	343.1	325.7	311.1	267.5	255.9
72.5°	273.3	255.9	235.5	212.3	203.6
75°	206.5	191.9	180.3	171.6	189.0
77.5°	142.5	136.7	127.9	119.2	116.3
80°	93.1	90.1	87.2	84.3	81.4
82.5°	55.3	55.3	55.3	55.3	55.3
85°	29.1	32.0	34.9	37.8	40.7
87.5°	17.4	17.4	20.4	23.3	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)