

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: P561774

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561774
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-12-4-LD4-2STD-35-UNV-93-97-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5323.0 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

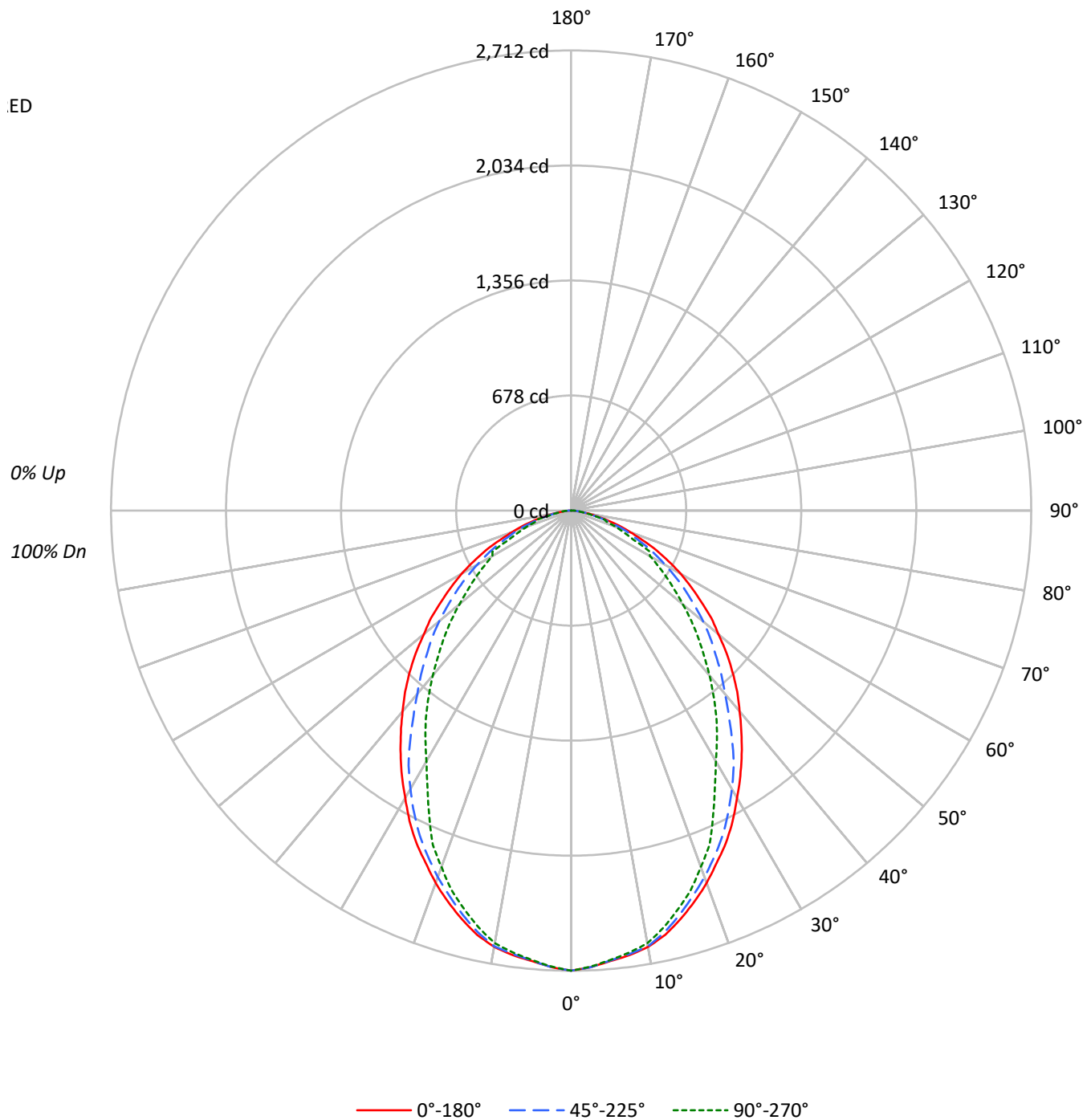
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7297	7297	7297
5°	7197	7189	7180
10°	7135	7126	7075
15°	6942	6873	6777
20°	6688	6580	6400
25°	6413	6273	5882
30°	6078	5883	5299
35°	5756	5437	4902
40°	5429	4955	4460
45°	5118	4581	4032
50°	4737	4252	3596
55°	4382	3853	3221
60°	4015	3442	2885
65°	3533	3014	2555
70°	2910	2639	2170
75°	2314	2020	2119
80°	1554	1457	1361
85°	966	1161	1355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5118 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.4	4.7
10°-20°	692.7	13.0
20°-30°	959.0	18.0
30°-40°	1022.6	19.2
40°-50°	932.9	17.5
50°-60°	730.8	13.7
60°-70°	476.3	8.9
70°-80°	211.0	4.0
80°-90°	45.3	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°	1904.1	35.8
0°-40°	2926.6	55.0
0°-60°	4590.3	86.2
0°-90°	5323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5323.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2712	2712	2712	2712	2712	
5°	2664	2661	2661	2658	2658	253
15°	2492	2492	2467	2442	2432	701
25°	2160	2147	2113	2038	1981	992
35°	1752	1740	1655	1530	1492	1095
45°	1345	1316	1204	1103	1060	1036
55°	934	906	821	724	686	838
65°	555	524	473	483	401	547
75°	223	207	194	185	204	239
85°	31	34	38	41	44	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2711.5	2711.5	2711.5	2711.5	2711.5
2.5°	2692.7	2692.7	2692.7	2689.5	2689.5
5°	2664.4	2661.3	2661.3	2658.2	2658.2
7.5°	2642.5	2639.4	2636.2	2633.1	2626.8
10°	2611.2	2611.2	2608.0	2592.3	2589.2
12.5°	2561.0	2557.9	2545.3	2523.4	2517.1
15°	2492.0	2492.0	2467.0	2441.9	2432.5
17.5°	2416.8	2413.7	2382.3	2357.3	2344.7
20°	2335.3	2329.0	2297.7	2256.9	2235.0
22.5°	2244.4	2244.4	2206.8	2153.5	2131.6
25°	2159.8	2147.2	2112.7	2037.5	1981.1
27.5°	2062.6	2043.8	2006.2	1899.6	1833.8
30°	1956.0	1946.6	1893.3	1755.4	1705.2
32.5°	1855.7	1840.0	1783.6	1639.4	1598.7
35°	1752.3	1739.7	1655.1	1529.7	1492.1
37.5°	1648.8	1633.1	1526.6	1426.3	1379.2
40°	1545.4	1526.6	1410.6	1319.7	1269.5
42.5°	1448.2	1423.1	1310.3	1213.1	1156.7
45°	1344.8	1316.5	1203.7	1103.4	1059.5
47.5°	1241.3	1216.2	1112.8	1009.4	959.2
50°	1131.6	1109.7	1015.6	912.2	858.9
52.5°	1040.7	1006.2	915.3	811.9	768.0
55°	934.1	905.9	821.3	724.1	686.5
57.5°	836.9	808.7	730.4	639.5	608.1
60°	746.0	705.3	639.5	561.1	536.0
62.5°	645.7	614.4	558.0	492.1	523.5
65°	554.8	523.5	473.3	482.7	401.2
67.5°	454.5	438.8	395.0	351.1	338.5
70°	369.9	351.1	335.4	288.4	275.8
72.5°	294.7	275.8	253.9	228.8	219.4
75°	222.6	206.9	194.3	184.9	203.8
77.5°	153.6	147.3	137.9	128.5	125.4
80°	100.3	97.2	94.0	90.9	87.8
82.5°	59.6	59.6	59.6	59.6	59.6
85°	31.3	34.5	37.6	40.8	43.9
87.5°	18.8	18.8	21.9	25.1	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)