

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: P561716

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561716
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-80-86-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5386.0 lumens
Efficiency: N/A
Efficacy: 80.9 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

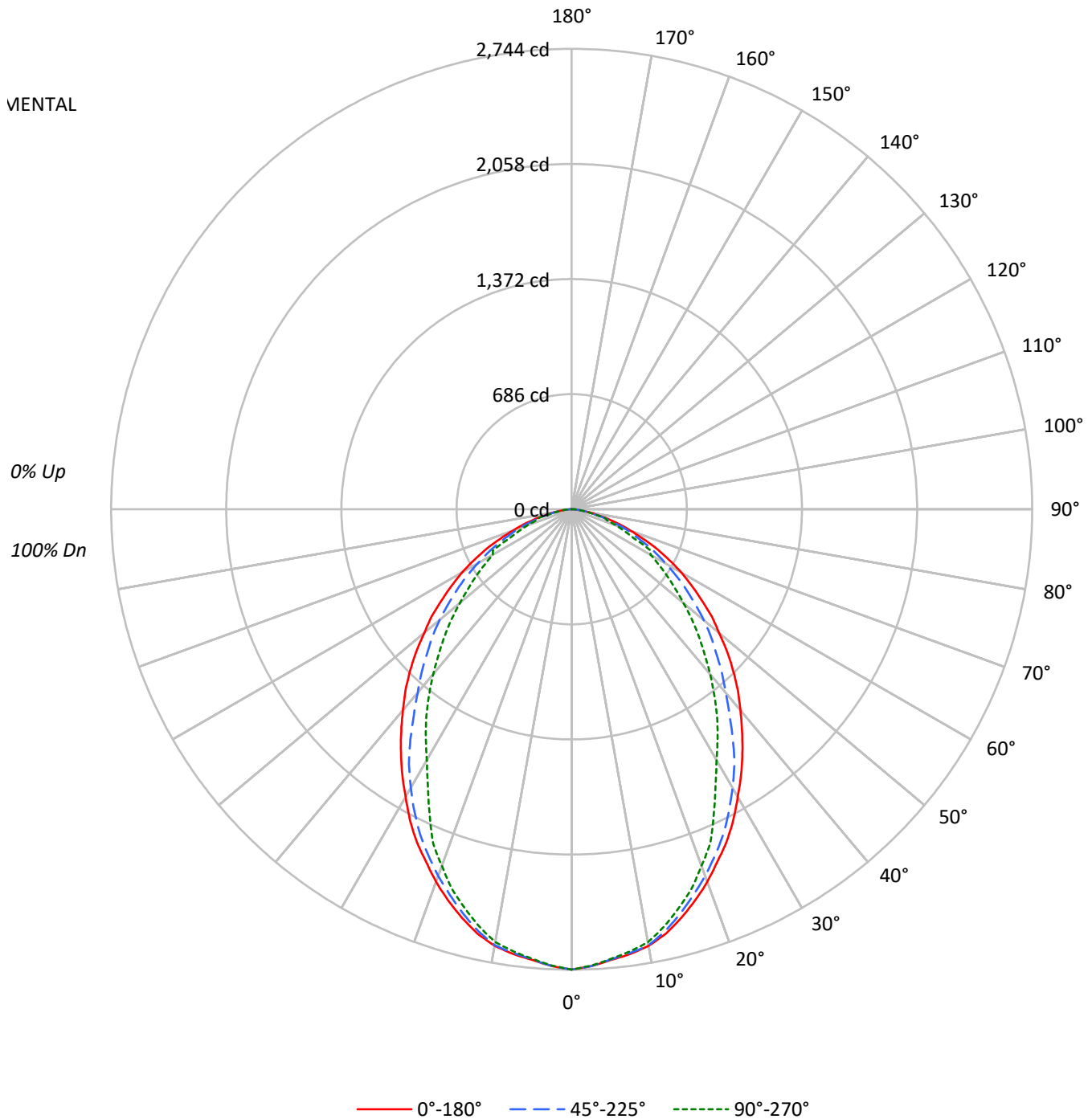
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561716

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-80-86-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561716

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-80-86-EDD-90

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				
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°	7383	7383	7383
5°	7283	7274	7265
10°	7220	7211	7159
15°	7025	6954	6857
20°	6767	6658	6476
25°	6489	6347	5952
30°	6150	5953	5361
35°	5824	5502	4959
40°	5493	5014	4513
45°	5178	4635	4080
50°	4793	4302	3638
55°	4434	3899	3259
60°	4063	3482	2919
65°	3575	3049	2585
70°	2945	2670	2196
75°	2341	2044	2144
80°	1573	1475	1376
85°	979	1176	1371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5178 cd/sqm



TEST NUMBER: P561716

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-80-86-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.4	4.7
10°-20°	700.9	13.0
20°-30°	970.3	18.0
30°-40°	1034.7	19.2
40°-50°	943.9	17.5
50°-60°	739.5	13.7
60°-70°	481.9	8.9
70°-80°	213.5	4.0
80°-90°	45.9	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°	1926.6	35.8
0°-40°	2961.3	55.0
0°-60°	4644.7	86.2
0°-90°	5386.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5386.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2744	2744	2744	2744	2744	
5°	2696	2693	2693	2690	2690	256
15°	2522	2522	2496	2471	2461	709
25°	2185	2173	2138	2062	2004	1003
35°	1773	1760	1675	1548	1510	1108
45°	1361	1332	1218	1116	1072	1048
55°	945	917	831	733	695	848
65°	561	530	479	488	406	553
75°	225	209	197	187	206	241
85°	32	35	38	41	44	44
90°	0	0	0	0	0	



TEST NUMBER: P561716

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-80-86-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2743.6	2743.6	2743.6	2743.6	2743.6
2.5°	2724.5	2724.5	2724.5	2721.4	2721.4
5°	2696.0	2692.8	2692.8	2689.6	2689.6
7.5°	2673.8	2670.6	2667.4	2664.3	2657.9
10°	2642.1	2642.1	2638.9	2623.0	2619.9
12.5°	2591.3	2588.1	2575.5	2553.3	2546.9
15°	2521.5	2521.5	2496.2	2470.8	2461.3
17.5°	2445.4	2442.2	2410.5	2385.1	2372.5
20°	2362.9	2356.6	2324.9	2283.7	2261.5
22.5°	2271.0	2271.0	2232.9	2179.0	2156.8
25°	2185.3	2172.6	2137.8	2061.6	2004.5
27.5°	2087.0	2068.0	2029.9	1922.1	1855.5
30°	1979.2	1969.7	1915.7	1776.2	1725.4
32.5°	1877.7	1861.8	1804.7	1658.8	1617.6
35°	1773.0	1760.3	1674.7	1547.8	1509.7
37.5°	1668.3	1652.5	1544.6	1443.1	1395.6
40°	1563.7	1544.6	1427.3	1335.3	1284.6
42.5°	1465.3	1440.0	1325.8	1227.5	1170.4
45°	1360.7	1332.1	1217.9	1116.5	1072.0
47.5°	1256.0	1230.6	1126.0	1021.3	970.6
50°	1145.0	1122.8	1027.6	923.0	869.1
52.5°	1053.0	1018.1	926.1	821.5	777.1
55°	945.2	916.6	831.0	732.7	694.6
57.5°	846.9	818.3	739.0	647.0	615.3
60°	754.9	713.6	647.0	567.7	542.4
62.5°	653.4	621.7	564.6	498.0	529.7
65°	561.4	529.7	478.9	488.4	406.0
67.5°	459.9	444.0	399.6	355.2	342.5
70°	374.3	355.2	339.4	291.8	279.1
72.5°	298.1	279.1	256.9	231.5	222.0
75°	225.2	209.3	196.6	187.1	206.2
77.5°	155.4	149.1	139.6	130.0	126.9
80°	101.5	98.3	95.2	92.0	88.8
82.5°	60.3	60.3	60.3	60.3	60.3
85°	31.7	34.9	38.1	41.2	44.4
87.5°	19.0	19.0	22.2	25.4	28.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)