

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: P561657

Luminaire Tested: FSR-12-4-LD4-2LO-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561657
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-LD4-2LO-50-UNV-80-88-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

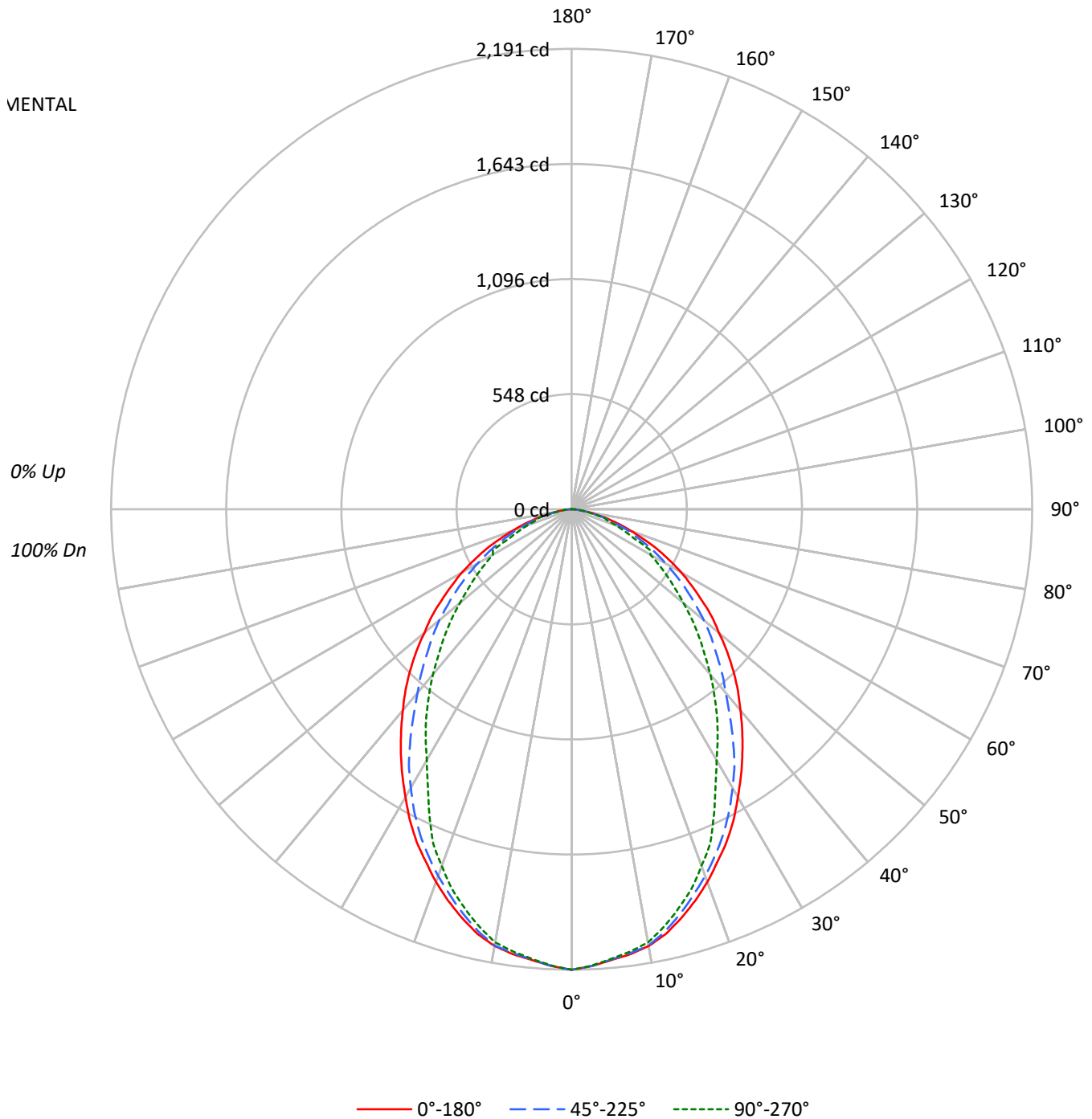
Lumens per Lamp: N/A
Luminaire Lumens: 4302.0 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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



TEST NUMBER: P561657
CATALOG NUMBER: FSR-12-4-LD4-2LO-50-UNV-80-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561657

CATALOG NUMBER: FSR-12-4-LD4-2LO-50-UNV-80-88-EDD

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°	5897	5897	5897
5°	5817	5810	5803
10°	5766	5760	5718
15°	5611	5555	5477
20°	5405	5318	5173
25°	5183	5070	4754
30°	4912	4755	4282
35°	4652	4394	3961
40°	4388	4005	3604
45°	4136	3702	3259
50°	3829	3436	2906
55°	3542	3114	2603
60°	3245	2781	2331
65°	2855	2436	2065
70°	2352	2133	1754
75°	1870	1633	1712
80°	1257	1178	1099
85°	781	939	1096

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4136 cd/sqm



TEST NUMBER: P561657

CATALOG NUMBER: FSR-12-4-LD4-2LO-50-UNV-80-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.0	4.7
10°-20°	559.8	13.0
20°-30°	775.0	18.0
30°-40°	826.4	19.2
40°-50°	753.9	17.5
50°-60°	590.6	13.7
60°-70°	384.9	8.9
70°-80°	170.6	4.0
80°-90°	36.6	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°	1538.9	35.8
0°-40°	2365.3	55.0
0°-60°	3709.9	86.2
0°-90°	4302.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4302.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2191	2191	2191	2191	2191	
5°	2153	2151	2151	2148	2148	204
15°	2014	2014	1994	1974	1966	566
25°	1746	1735	1708	1647	1601	801
35°	1416	1406	1338	1236	1206	885
45°	1087	1064	973	892	856	837
55°	755	732	664	585	555	677
65°	448	423	382	390	324	442
75°	180	167	157	150	165	193
85°	25	28	30	33	36	35
90°	0	0	0	0	0	



TEST NUMBER: P561657

CATALOG NUMBER: FSR-12-4-LD4-2LO-50-UNV-80-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2191.4	2191.4	2191.4	2191.4	2191.4
2.5°	2176.2	2176.2	2176.2	2173.6	2173.6
5°	2153.4	2150.8	2150.8	2148.3	2148.3
7.5°	2135.6	2133.1	2130.6	2128.0	2123.0
10°	2110.3	2110.3	2107.8	2095.1	2092.6
12.5°	2069.8	2067.2	2057.1	2039.4	2034.3
15°	2014.0	2014.0	1993.8	1973.5	1965.9
17.5°	1953.2	1950.7	1925.4	1905.1	1895.0
20°	1887.4	1882.3	1857.0	1824.0	1806.3
22.5°	1813.9	1813.9	1783.5	1740.4	1722.7
25°	1745.5	1735.4	1707.5	1646.7	1601.1
27.5°	1667.0	1651.8	1621.4	1535.2	1482.0
30°	1580.8	1573.2	1530.2	1418.7	1378.2
32.5°	1499.8	1487.1	1441.5	1325.0	1292.0
35°	1416.2	1406.0	1337.6	1236.3	1205.9
37.5°	1332.6	1319.9	1233.8	1152.7	1114.7
40°	1249.0	1233.8	1140.0	1066.6	1026.0
42.5°	1170.4	1150.2	1059.0	980.4	934.8
45°	1086.8	1064.0	972.8	891.8	856.3
47.5°	1003.2	983.0	899.4	815.8	775.2
50°	914.6	896.8	820.8	737.2	694.1
52.5°	841.1	813.2	739.7	656.1	620.7
55°	754.9	732.1	663.7	585.2	554.8
57.5°	676.4	653.6	590.3	516.8	491.5
60°	602.9	570.0	516.8	453.5	433.2
62.5°	521.9	496.5	450.9	397.7	423.1
65°	448.4	423.1	382.5	390.1	324.3
67.5°	367.3	354.7	319.2	283.7	273.6
70°	298.9	283.7	271.1	233.1	222.9
72.5°	238.1	222.9	205.2	184.9	177.3
75°	179.9	167.2	157.1	149.5	164.7
77.5°	124.1	119.1	111.5	103.9	101.3
80°	81.1	78.5	76.0	73.5	70.9
82.5°	48.1	48.1	48.1	48.1	48.1
85°	25.3	27.9	30.4	32.9	35.5
87.5°	15.2	15.2	17.7	20.3	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)