

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: P560631

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-80-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560631  
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-12-2-LD4-2STD-40-UNV-80-87-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

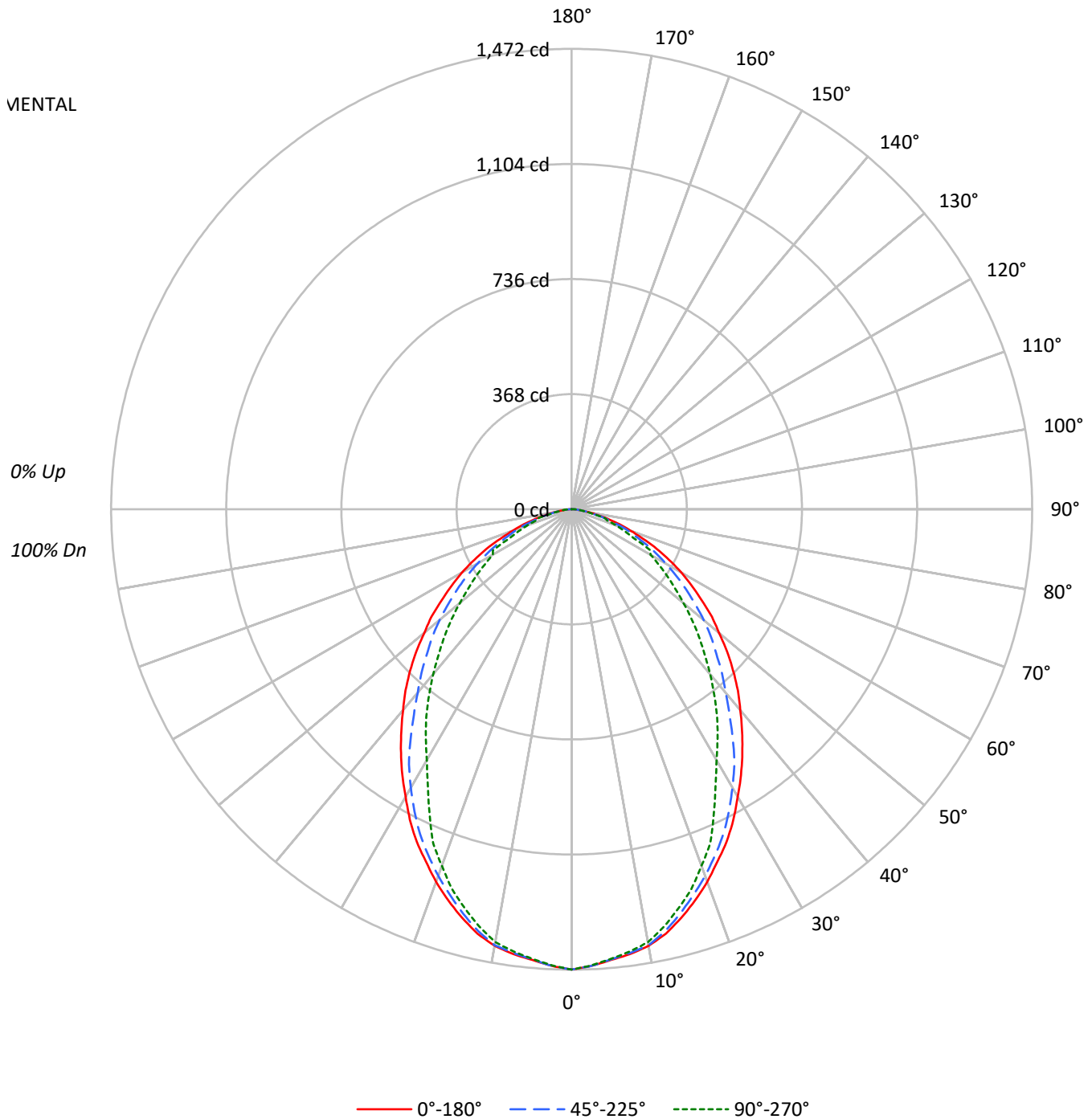
Lumens per Lamp: N/A  
Luminaire Lumens: 2889.0 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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: P560631

CATALOG NUMBER: FSR-12-2-LD4-2STD-40-UNV-80-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P560631

CATALOG NUMBER: FSR-12-2-LD4-2STD-40-UNV-80-87-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7920	7920	7920
5°	7813	7803	7794
10°	7745	7736	7680
15°	7536	7460	7356
20°	7259	7142	6947
25°	6961	6809	6385
30°	6597	6386	5752
35°	6248	5902	5321
40°	5892	5379	4841
45°	5555	4972	4376
50°	5143	4615	3903
55°	4757	4182	3496
60°	4358	3736	3131
65°	3834	3272	2774
70°	3160	2864	2356
75°	2512	2194	2300
80°	1686	1581	1475
85°	1050	1260	1470

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5555 cd/sqm



TEST NUMBER: P560631

CATALOG NUMBER: FSR-12-2-LD4-2STD-40-UNV-80-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.0	4.7
10°-20°	376.0	13.0
20°-30°	520.5	18.0
30°-40°	555.0	19.2
40°-50°	506.3	17.5
50°-60°	396.7	13.7
60°-70°	258.5	8.9
70°-80°	114.5	4.0
80°-90°	24.6	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°	1033.4	35.8
0°-40°	1588.4	55.0
0°-60°	2491.4	86.2
0°-90°	2889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2889.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1472	1472	1472	1472	1472	
5°	1446	1444	1444	1443	1443	137
15°	1352	1352	1339	1325	1320	380
25°	1172	1165	1147	1106	1075	538
35°	951	944	898	830	810	595
45°	730	714	653	599	575	562
55°	507	492	446	393	373	455
65°	301	284	257	262	218	297
75°	121	112	106	100	111	129
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



TEST NUMBER: P560631

CATALOG NUMBER: FSR-12-2-LD4-2STD-40-UNV-80-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1471.6	1471.6	1471.6	1471.6	1471.6
2.5°	1461.4	1461.4	1461.4	1459.7	1459.7
5°	1446.1	1444.4	1444.4	1442.7	1442.7
7.5°	1434.2	1432.5	1430.8	1429.1	1425.7
10°	1417.2	1417.2	1415.5	1407.0	1405.3
12.5°	1390.0	1388.3	1381.4	1369.5	1366.1
15°	1352.5	1352.5	1338.9	1325.3	1320.2
17.5°	1311.7	1310.0	1293.0	1279.4	1272.6
20°	1267.5	1264.1	1247.0	1224.9	1213.0
22.5°	1218.1	1218.1	1197.7	1168.8	1156.9
25°	1172.2	1165.4	1146.7	1105.8	1075.2
27.5°	1119.5	1109.2	1088.8	1031.0	995.3
30°	1061.6	1056.5	1027.6	952.7	925.5
32.5°	1007.2	998.7	968.0	889.8	867.7
35°	951.0	944.2	898.3	830.2	809.8
37.5°	894.9	886.4	828.5	774.1	748.6
40°	838.7	828.5	765.6	716.2	689.0
42.5°	786.0	772.4	711.1	658.4	627.8
45°	729.9	714.5	653.3	598.9	575.0
47.5°	673.7	660.1	604.0	547.8	520.6
50°	614.2	602.3	551.2	495.1	466.2
52.5°	564.8	546.1	496.8	440.6	416.8
55°	507.0	491.7	445.7	393.0	372.6
57.5°	454.2	438.9	396.4	347.1	330.1
60°	404.9	382.8	347.1	304.5	290.9
62.5°	350.5	333.5	302.8	267.1	284.1
65°	301.1	284.1	256.9	262.0	217.8
67.5°	246.7	238.2	214.4	190.5	183.7
70°	200.8	190.5	182.0	156.5	149.7
72.5°	159.9	149.7	137.8	124.2	119.1
75°	120.8	112.3	105.5	100.4	110.6
77.5°	83.4	80.0	74.9	69.8	68.1
80°	54.4	52.7	51.0	49.3	47.6
82.5°	32.3	32.3	32.3	32.3	32.3
85°	17.0	18.7	20.4	22.1	23.8
87.5°	10.2	10.2	11.9	13.6	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)