

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: P560316

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560316  
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-LD4-2HI-50-UNV-80-96-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

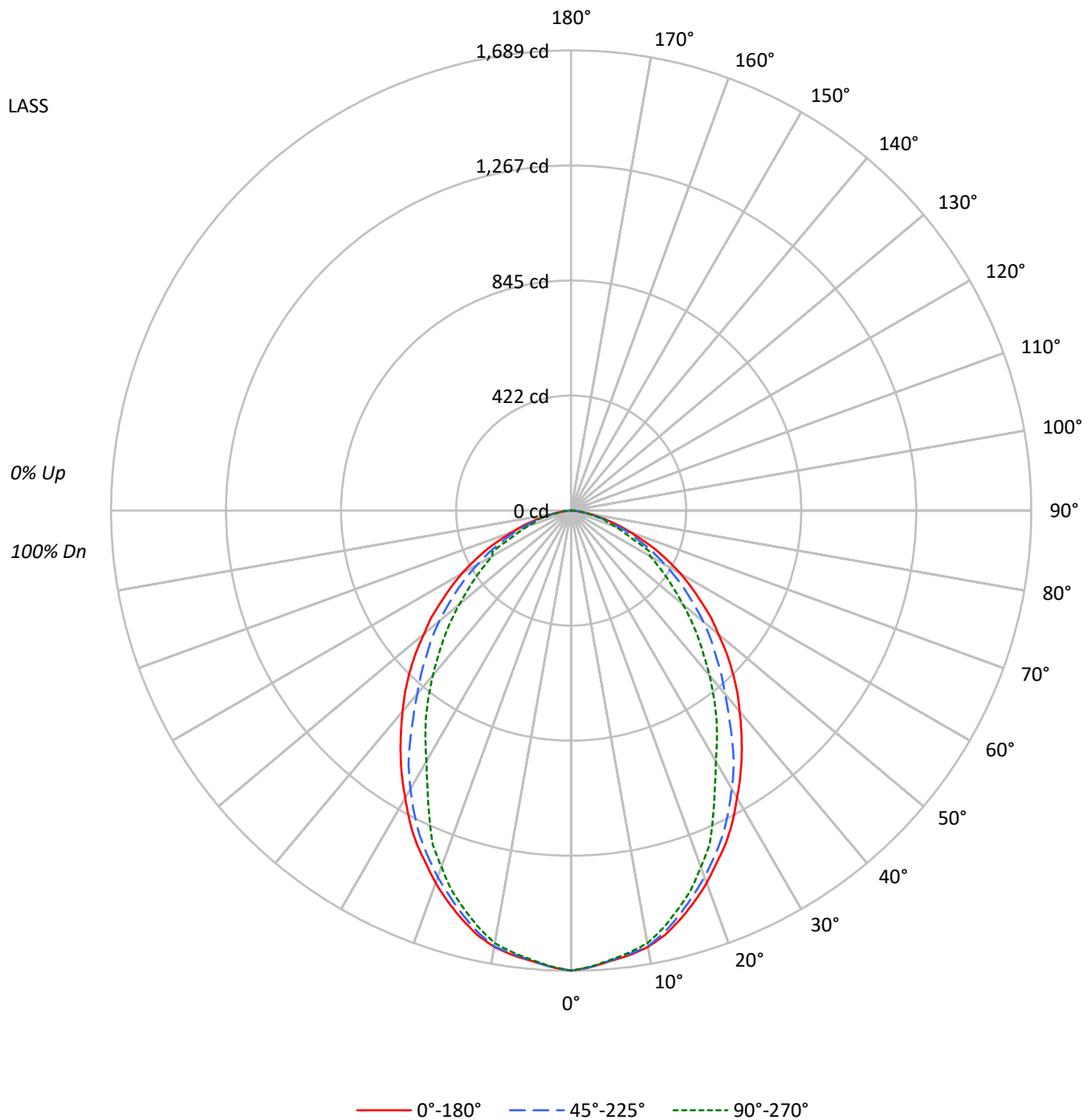
Lumens per Lamp: N/A  
Luminaire Lumens: 3315.0 lumens  
Efficiency: N/A  
Efficacy: 76.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P560316

CATALOG NUMBER: FSR-12-2-LD4-2HI-50-UNV-80-96-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P560316

CATALOG NUMBER: FSR-12-2-LD4-2HI-50-UNV-80-96-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	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°	9088	9088	9088
5°	8964	8954	8943
10°	8887	8876	8812
15°	8647	8560	8441
20°	8330	8195	7972
25°	7987	7814	7327
30°	7570	7328	6600
35°	7170	6772	6105
40°	6761	6172	5554
45°	6374	5705	5022
50°	5900	5296	4479
55°	5458	4799	4011
60°	5001	4286	3593
65°	4400	3754	3182
70°	3626	3287	2703
75°	2882	2516	2639
80°	1937	1816	1695
85°	1204	1445	1686

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6374 cd/sqm



TEST NUMBER: P560316

CATALOG NUMBER: FSR-12-2-LD4-2HI-50-UNV-80-96-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.2	4.7
10°-20°	431.4	13.0
20°-30°	597.2	18.0
30°-40°	636.8	19.2
40°-50°	581.0	17.5
50°-60°	455.1	13.7
60°-70°	296.6	8.9
70°-80°	131.4	4.0
80°-90°	28.2	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°	1185.8	35.8
0°-40°	1822.6	55.0
0°-60°	2858.7	86.2
0°-90°	3315.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3315.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1689	1689	1689	1689	1689	
5°	1659	1657	1657	1655	1655	158
15°	1552	1552	1536	1521	1515	436
25°	1345	1337	1316	1269	1234	617
35°	1091	1083	1031	953	929	682
45°	838	820	750	687	660	645
55°	582	564	512	451	428	522
65°	346	326	295	301	250	341
75°	139	129	121	115	127	149
85°	20	22	23	25	27	27
90°	0	0	0	0	0	



TEST NUMBER: P560316

CATALOG NUMBER: FSR-12-2-LD4-2HI-50-UNV-80-96-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1688.6	1688.6	1688.6	1688.6	1688.6
2.5°	1676.9	1676.9	1676.9	1675.0	1675.0
5°	1659.3	1657.4	1657.4	1655.4	1655.4
7.5°	1645.7	1643.7	1641.8	1639.8	1635.9
10°	1626.1	1626.1	1624.2	1614.4	1612.5
12.5°	1594.9	1593.0	1585.2	1571.5	1567.6
15°	1552.0	1552.0	1536.3	1520.7	1514.9
17.5°	1505.1	1503.2	1483.6	1468.0	1460.2
20°	1454.4	1450.5	1430.9	1405.6	1391.9
22.5°	1397.7	1397.7	1374.3	1341.1	1327.5
25°	1345.0	1337.2	1315.8	1268.9	1233.8
27.5°	1284.5	1272.8	1249.4	1183.0	1142.0
30°	1218.1	1212.3	1179.1	1093.2	1062.0
32.5°	1155.7	1145.9	1110.8	1021.0	995.6
35°	1091.3	1083.4	1030.7	952.7	929.2
37.5°	1026.8	1017.1	950.7	888.2	858.9
40°	962.4	950.7	878.5	821.9	790.6
42.5°	901.9	886.3	816.0	755.5	720.3
45°	837.5	819.9	749.6	687.2	659.8
47.5°	773.1	757.4	693.0	628.6	597.4
50°	704.7	691.1	632.5	568.1	534.9
52.5°	648.1	626.6	570.0	505.6	478.3
55°	581.7	564.2	511.5	450.9	427.5
57.5°	521.2	503.7	454.9	398.2	378.7
60°	464.6	439.2	398.2	349.4	333.8
62.5°	402.1	382.6	347.5	306.5	326.0
65°	345.5	326.0	294.8	300.6	249.9
67.5°	283.1	273.3	246.0	218.6	210.8
70°	230.4	218.6	208.9	179.6	171.8
72.5°	183.5	171.8	158.1	142.5	136.7
75°	138.6	128.8	121.0	115.2	126.9
77.5°	95.7	91.8	85.9	80.0	78.1
80°	62.5	60.5	58.6	56.6	54.7
82.5°	37.1	37.1	37.1	37.1	37.1
85°	19.5	21.5	23.4	25.4	27.3
87.5°	11.7	11.7	13.7	15.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)