

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: P560239

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-93-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560239  
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-35-UNV-93-97-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

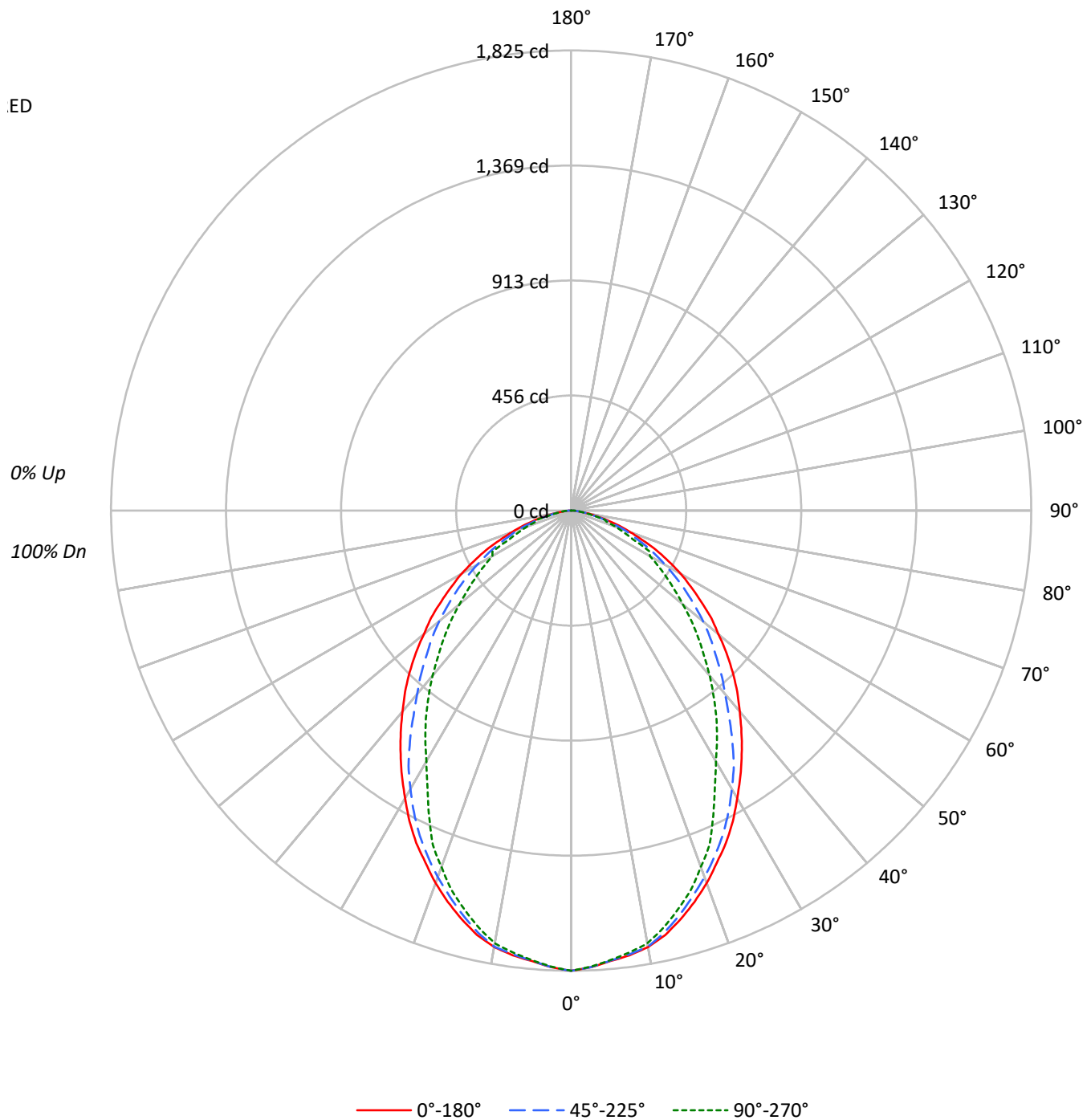
Lumens per Lamp: N/A  
Luminaire Lumens: 3583.0 lumens  
Efficiency: N/A  
Efficacy: 82.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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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	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°	9823	9823	9823
5°	9689	9678	9667
10°	9605	9594	9524
15°	9346	9253	9123
20°	9003	8858	8616
25°	8633	8445	7919
30°	8182	7920	7133
35°	7750	7320	6599
40°	7308	6671	6003
45°	6890	6167	5428
50°	6378	5724	4840
55°	5900	5187	4336
60°	5406	4633	3884
65°	4756	4057	3440
70°	3918	3553	2922
75°	3115	2720	2851
80°	2092	1962	1832
85°	1303	1562	1822

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6890 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.9	4.7
10°-20°	466.3	13.0
20°-30°	645.5	18.0
30°-40°	688.3	19.2
40°-50°	627.9	17.5
50°-60°	491.9	13.7
60°-70°	320.6	8.9
70°-80°	142.0	4.0
80°-90°	30.5	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°	1281.7	35.8
0°-40°	1970.0	55.0
0°-60°	3089.8	86.2
0°-90°	3583.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3583.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1825	1825	1825	1825	1825	
5°	1794	1791	1791	1789	1789	170
15°	1677	1677	1661	1644	1637	472
25°	1454	1445	1422	1372	1334	667
35°	1180	1171	1114	1030	1004	737
45°	905	886	810	743	713	697
55°	629	610	553	487	462	564
65°	374	352	319	325	270	368
75°	150	139	131	124	137	161
85°	21	23	25	27	30	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1825.1	1825.1	1825.1	1825.1	1825.1
2.5°	1812.5	1812.5	1812.5	1810.4	1810.4
5°	1793.5	1791.4	1791.4	1789.3	1789.3
7.5°	1778.7	1776.6	1774.5	1772.4	1768.2
10°	1757.6	1757.6	1755.5	1745.0	1742.8
12.5°	1723.9	1721.7	1713.3	1698.5	1694.3
15°	1677.4	1677.4	1660.6	1643.7	1637.3
17.5°	1626.8	1624.7	1603.6	1586.7	1578.3
20°	1571.9	1567.7	1546.6	1519.2	1504.4
22.5°	1510.7	1510.7	1485.4	1449.6	1434.8
25°	1453.8	1445.3	1422.1	1371.5	1333.5
27.5°	1388.4	1375.7	1350.4	1278.6	1234.3
30°	1316.6	1310.3	1274.4	1181.6	1147.8
32.5°	1249.1	1238.6	1200.6	1103.5	1076.1
35°	1179.5	1171.0	1114.1	1029.7	1004.4
37.5°	1109.8	1099.3	1027.6	960.0	928.4
40°	1040.2	1027.6	949.5	888.3	854.5
42.5°	974.8	957.9	882.0	816.6	778.6
45°	905.2	886.2	810.2	742.7	713.2
47.5°	835.6	818.7	749.0	679.4	645.7
50°	761.7	746.9	683.6	614.0	578.1
52.5°	700.5	677.3	616.1	546.5	516.9
55°	628.8	609.8	552.8	487.4	462.1
57.5°	563.4	544.4	491.6	430.4	409.3
60°	502.2	474.7	430.4	377.7	360.8
62.5°	434.7	413.6	375.6	331.3	352.4
65°	373.5	352.4	318.6	324.9	270.1
67.5°	305.9	295.4	265.9	236.3	227.9
70°	249.0	236.3	225.8	194.1	185.7
72.5°	198.3	185.7	170.9	154.0	147.7
75°	149.8	139.3	130.8	124.5	137.1
77.5°	103.4	99.2	92.8	86.5	84.4
80°	67.5	65.4	63.3	61.2	59.1
82.5°	40.1	40.1	40.1	40.1	40.1
85°	21.1	23.2	25.3	27.4	29.5
87.5°	12.7	12.7	14.8	16.9	19.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)