

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: P560176

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560176  
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-80-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

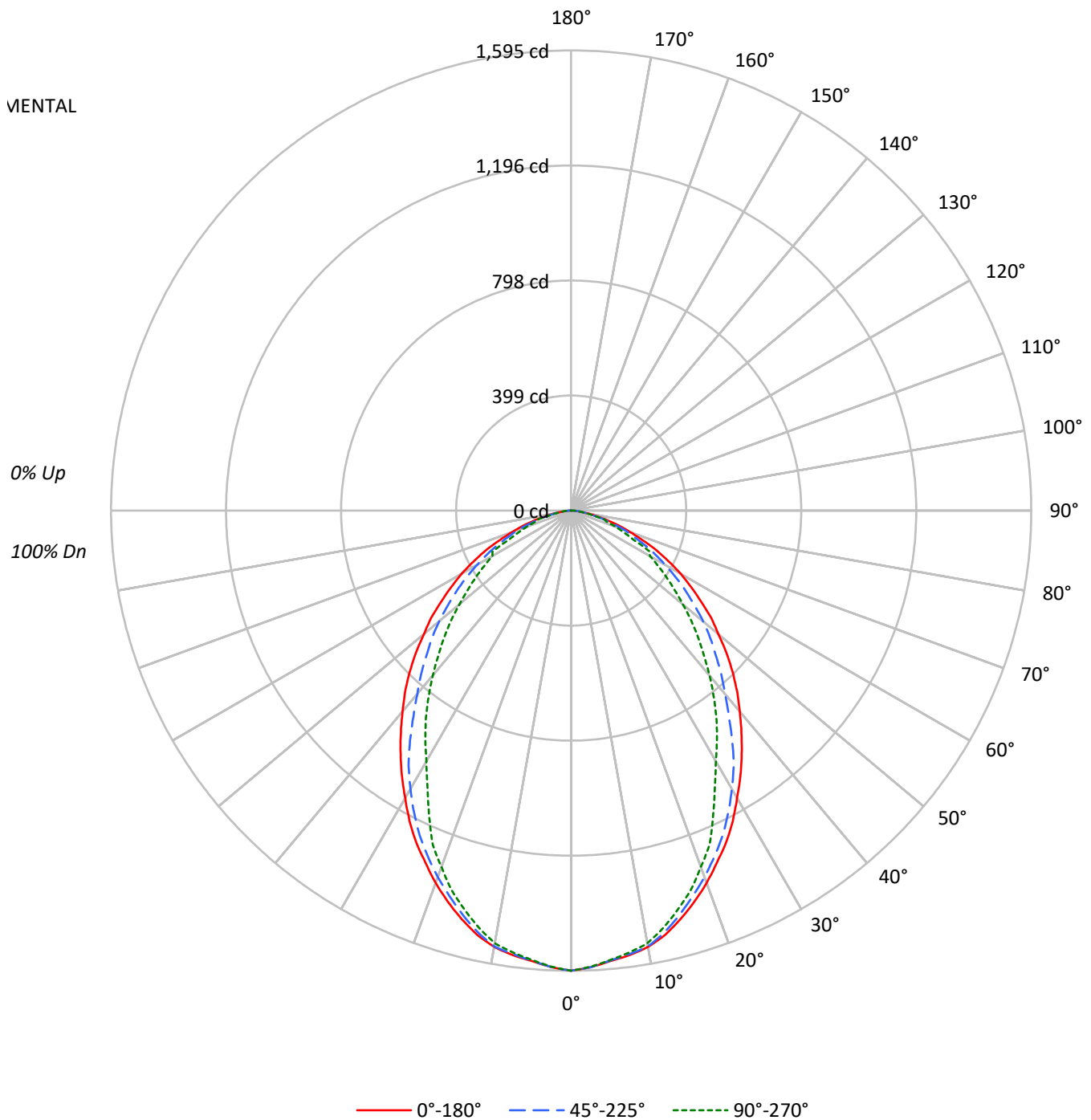
Lumens per Lamp: N/A  
Luminaire Lumens: 3131.0 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8584	8584	8584
5°	8467	8457	8447
10°	8394	8383	8323
15°	8167	8085	7972
20°	7867	7741	7529
25°	7544	7380	6920
30°	7150	6921	6233
35°	6772	6396	5767
40°	6386	5829	5246
45°	6020	5389	4743
50°	5573	5002	4230
55°	5156	4533	3789
60°	4723	4048	3394
65°	4157	3545	3005
70°	3424	3105	2554
75°	2722	2377	2491
80°	1829	1714	1599
85°	1136	1365	1593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6020 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.5	4.7
10°-20°	407.4	13.0
20°-30°	564.1	18.0
30°-40°	601.5	19.2
40°-50°	548.7	17.5
50°-60°	429.9	13.7
60°-70°	280.2	8.9
70°-80°	124.1	4.0
80°-90°	26.7	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°	1120.0	35.8
0°-40°	1721.4	55.0
0°-60°	2700.0	86.2
0°-90°	3131.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3131.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1595	1595	1595	1595	1595	
5°	1567	1565	1565	1564	1564	149
15°	1466	1466	1451	1436	1431	412
25°	1270	1263	1243	1198	1165	583
35°	1031	1023	974	900	878	644
45°	791	774	708	649	623	609
55°	550	533	483	426	404	493
65°	326	308	278	284	236	322
75°	131	122	114	109	120	140
85°	18	20	22	24	26	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1594.9	1594.9	1594.9	1594.9	1594.9
2.5°	1583.8	1583.8	1583.8	1582.0	1582.0
5°	1567.2	1565.4	1565.4	1563.5	1563.5
7.5°	1554.3	1552.5	1550.6	1548.8	1545.1
10°	1535.9	1535.9	1534.0	1524.8	1523.0
12.5°	1506.4	1504.5	1497.2	1484.3	1480.6
15°	1465.8	1465.8	1451.1	1436.3	1430.8
17.5°	1421.6	1419.7	1401.3	1386.5	1379.2
20°	1373.6	1369.9	1351.5	1327.5	1314.6
22.5°	1320.2	1320.2	1298.0	1266.7	1253.8
25°	1270.4	1263.0	1242.7	1198.5	1165.3
27.5°	1213.2	1202.2	1180.0	1117.3	1078.6
30°	1150.5	1145.0	1113.7	1032.5	1003.0
32.5°	1091.5	1082.3	1049.1	964.3	940.3
35°	1030.7	1023.3	973.5	899.8	877.7
37.5°	969.8	960.6	897.9	838.9	811.3
40°	909.0	897.9	829.7	776.2	746.7
42.5°	851.8	837.1	770.7	713.6	680.4
45°	791.0	774.4	708.0	649.0	623.2
47.5°	730.1	715.4	654.6	593.7	564.2
50°	665.6	652.7	597.4	536.5	505.2
52.5°	612.1	591.9	538.4	477.5	451.7
55°	549.5	532.9	483.1	425.9	403.8
57.5°	492.3	475.7	429.6	376.1	357.7
60°	438.8	414.9	376.1	330.0	315.3
62.5°	379.8	361.4	328.2	289.5	307.9
65°	326.4	307.9	278.4	283.9	236.0
67.5°	267.4	258.1	232.3	206.5	199.1
70°	217.6	206.5	197.3	169.6	162.3
72.5°	173.3	162.3	149.3	134.6	129.1
75°	130.9	121.7	114.3	108.8	119.8
77.5°	90.3	86.7	81.1	75.6	73.8
80°	59.0	57.2	55.3	53.5	51.6
82.5°	35.0	35.0	35.0	35.0	35.0
85°	18.4	20.3	22.1	24.0	25.8
87.5°	11.1	11.1	12.9	14.8	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)