

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: P559056

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-82-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559056  
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-12-1-LD4-2HI-35-UNV-82-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

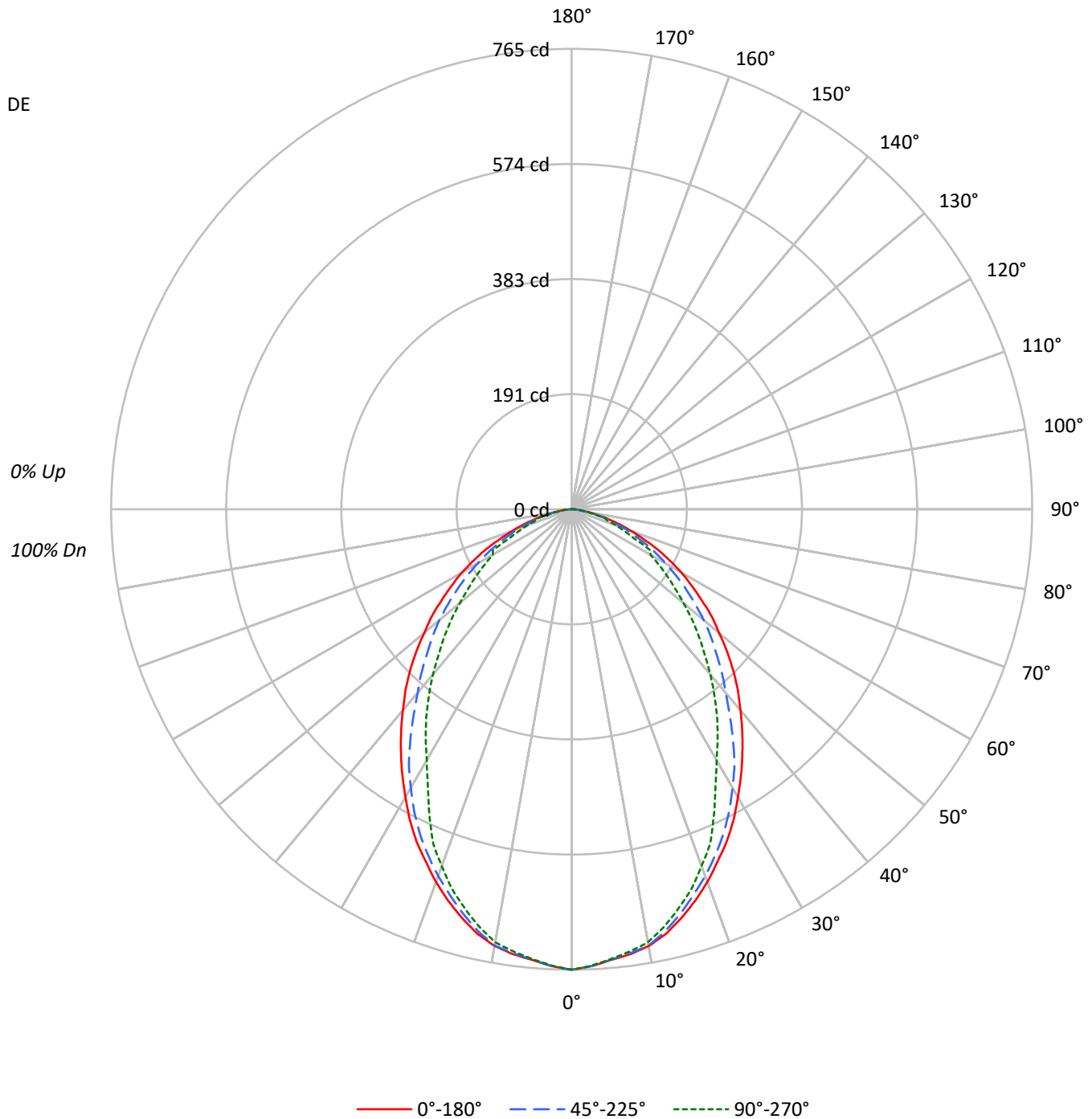
Lumens per Lamp: N/A  
Luminaire Lumens: 1502.0 lumens  
Efficiency: N/A  
Efficacy: 69.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8235	8235	8235
5°	8123	8113	8105
10°	8053	8043	7985
15°	7836	7757	7649
20°	7549	7426	7224
25°	7238	7081	6639
30°	6860	6640	5981
35°	6497	6137	5532
40°	6128	5592	5033
45°	5777	5171	4552
50°	5347	4799	4059
55°	4947	4348	3635
60°	4532	3884	3257
65°	3989	3403	2883
70°	3286	2977	2448
75°	2612	2279	2391
80°	1754	1643	1537
85°	1087	1309	1531

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5777 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.2	4.7
10°-20°	195.5	13.0
20°-30°	270.6	18.0
30°-40°	288.5	19.2
40°-50°	263.2	17.5
50°-60°	206.2	13.7
60°-70°	134.4	8.9
70°-80°	59.5	4.0
80°-90°	12.8	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°	537.3	35.8
0°-40°	825.8	55.0
0°-60°	1295.3	86.2
0°-90°	1502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1502.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	752	751	751	750	750	71
15°	703	703	696	689	686	198
25°	609	606	596	575	559	280
35°	494	491	467	432	421	309
45°	380	372	340	311	299	292
55°	264	256	232	204	194	236
65°	157	148	134	136	113	154
75°	63	58	55	52	58	67
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	765.1	765.1	765.1	765.1	765.1
2.5°	759.8	759.8	759.8	758.9	758.9
5°	751.8	750.9	750.9	750.1	750.1
7.5°	745.6	744.8	743.9	743.0	741.2
10°	736.8	736.8	735.9	731.5	730.6
12.5°	722.6	721.8	718.2	712.0	710.3
15°	703.2	703.2	696.1	689.0	686.4
17.5°	682.0	681.1	672.2	665.1	661.6
20°	659.0	657.2	648.3	636.8	630.7
22.5°	633.3	633.3	622.7	607.7	601.5
25°	609.4	605.9	596.2	574.9	559.0
27.5°	582.0	576.7	566.1	536.0	517.4
30°	551.9	549.3	534.2	495.3	481.2
32.5°	523.6	519.2	503.3	462.6	451.1
35°	494.4	490.9	467.0	431.6	421.0
37.5°	465.3	460.8	430.8	402.5	389.2
40°	436.1	430.8	398.0	372.4	358.2
42.5°	408.6	401.6	369.7	342.3	326.4
45°	379.5	371.5	339.7	311.3	299.0
47.5°	350.3	343.2	314.0	284.8	270.7
50°	319.3	313.1	286.6	257.4	242.4
52.5°	293.7	283.9	258.3	229.1	216.7
55°	263.6	255.6	231.7	204.3	193.7
57.5°	236.2	228.2	206.1	180.4	171.6
60°	210.5	199.0	180.4	158.3	151.3
62.5°	182.2	173.4	157.4	138.9	147.7
65°	156.6	147.7	133.6	136.2	113.2
67.5°	128.3	123.8	111.4	99.1	95.5
70°	104.4	99.1	94.6	81.4	77.8
72.5°	83.1	77.8	71.6	64.6	61.9
75°	62.8	58.4	54.8	52.2	57.5
77.5°	43.3	41.6	38.9	36.3	35.4
80°	28.3	27.4	26.5	25.7	24.8
82.5°	16.8	16.8	16.8	16.8	16.8
85°	8.8	9.7	10.6	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)