

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: P558512

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558512  
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-LD4-1HI-40-UNV-80-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

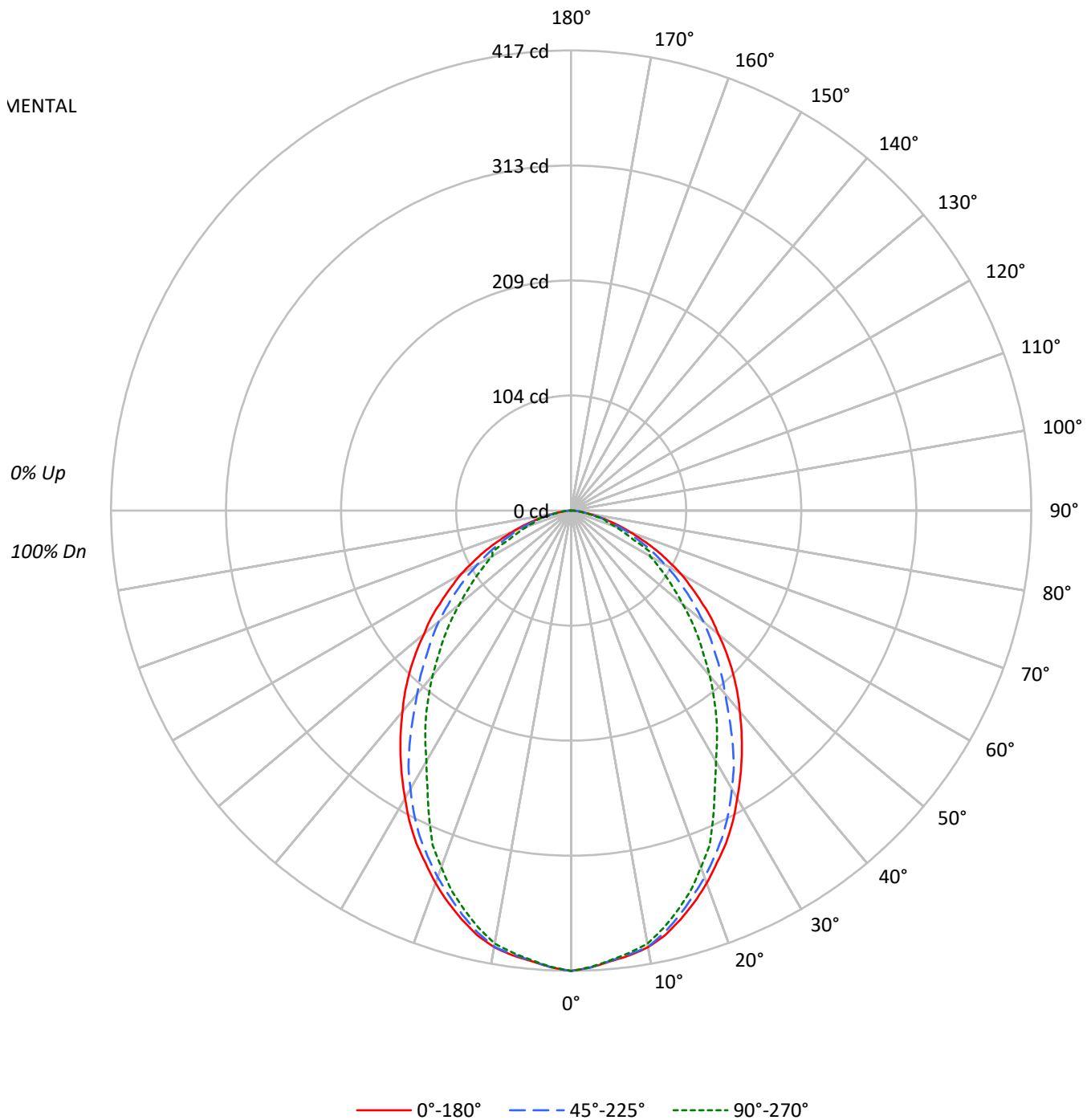
Lumens per Lamp: N/A  
Luminaire Lumens: 819.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4491	4491	4491
5°	4430	4425	4419
10°	4392	4386	4354
15°	4272	4230	4171
20°	4116	4049	3939
25°	3947	3861	3620
30°	3741	3621	3261
35°	3543	3347	3017
40°	3341	3049	2744
45°	3150	2819	2481
50°	2915	2617	2212
55°	2697	2372	1982
60°	2471	2118	1776
65°	2175	1854	1571
70°	1791	1624	1334
75°	1422	1243	1302
80°	955	899	837
85°	593	716	840

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3150 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.8	4.7
10°-20°	106.6	13.0
20°-30°	147.6	18.0
30°-40°	157.3	19.2
40°-50°	143.5	17.5
50°-60°	112.4	13.7
60°-70°	73.3	8.9
70°-80°	32.5	4.0
80°-90°	7.0	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°	293.0	35.8
0°-40°	450.3	55.0
0°-60°	706.3	86.2
0°-90°	819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	819.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	417	417	417	417	417	
5°	410	410	410	409	409	39
15°	383	383	380	376	374	108
25°	332	330	325	314	305	153
35°	270	268	255	235	230	169
45°	207	203	185	170	163	159
55°	144	139	126	111	106	129
65°	85	80	73	74	62	84
75°	34	32	30	28	31	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	417.2	417.2	417.2	417.2	417.2
2.5°	414.3	414.3	414.3	413.8	413.8
5°	410.0	409.5	409.5	409.0	409.0
7.5°	406.6	406.1	405.6	405.1	404.2
10°	401.8	401.8	401.3	398.9	398.4
12.5°	394.0	393.6	391.6	388.2	387.3
15°	383.4	383.4	379.6	375.7	374.3
17.5°	371.9	371.4	366.5	362.7	360.8
20°	359.3	358.3	353.5	347.3	343.9
22.5°	345.3	345.3	339.5	331.3	328.0
25°	332.3	330.4	325.1	313.5	304.8
27.5°	317.4	314.5	308.7	292.3	282.1
30°	301.0	299.5	291.3	270.1	262.4
32.5°	285.5	283.1	274.4	252.2	246.0
35°	269.6	267.7	254.7	235.4	229.6
37.5°	253.7	251.3	234.9	219.4	212.2
40°	237.8	234.9	217.0	203.0	195.3
42.5°	222.8	219.0	201.6	186.6	178.0
45°	206.9	202.6	185.2	169.8	163.0
47.5°	191.0	187.1	171.2	155.3	147.6
50°	174.1	170.7	156.3	140.3	132.1
52.5°	160.1	154.8	140.8	124.9	118.2
55°	143.7	139.4	126.4	111.4	105.6
57.5°	128.8	124.4	112.4	98.4	93.6
60°	114.8	108.5	98.4	86.3	82.5
62.5°	99.4	94.5	85.8	75.7	80.5
65°	85.4	80.5	72.8	74.3	61.7
67.5°	69.9	67.5	60.8	54.0	52.1
70°	56.9	54.0	51.6	44.4	42.4
72.5°	45.3	42.4	39.1	35.2	33.8
75°	34.2	31.8	29.9	28.5	31.3
77.5°	23.6	22.7	21.2	19.8	19.3
80°	15.4	15.0	14.5	14.0	13.5
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.8	5.3	5.8	6.3	6.8
87.5°	2.9	2.9	3.4	3.9	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)