

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: P560078

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-81-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560078  
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-LD4-1STD-40-UNV-81-97-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

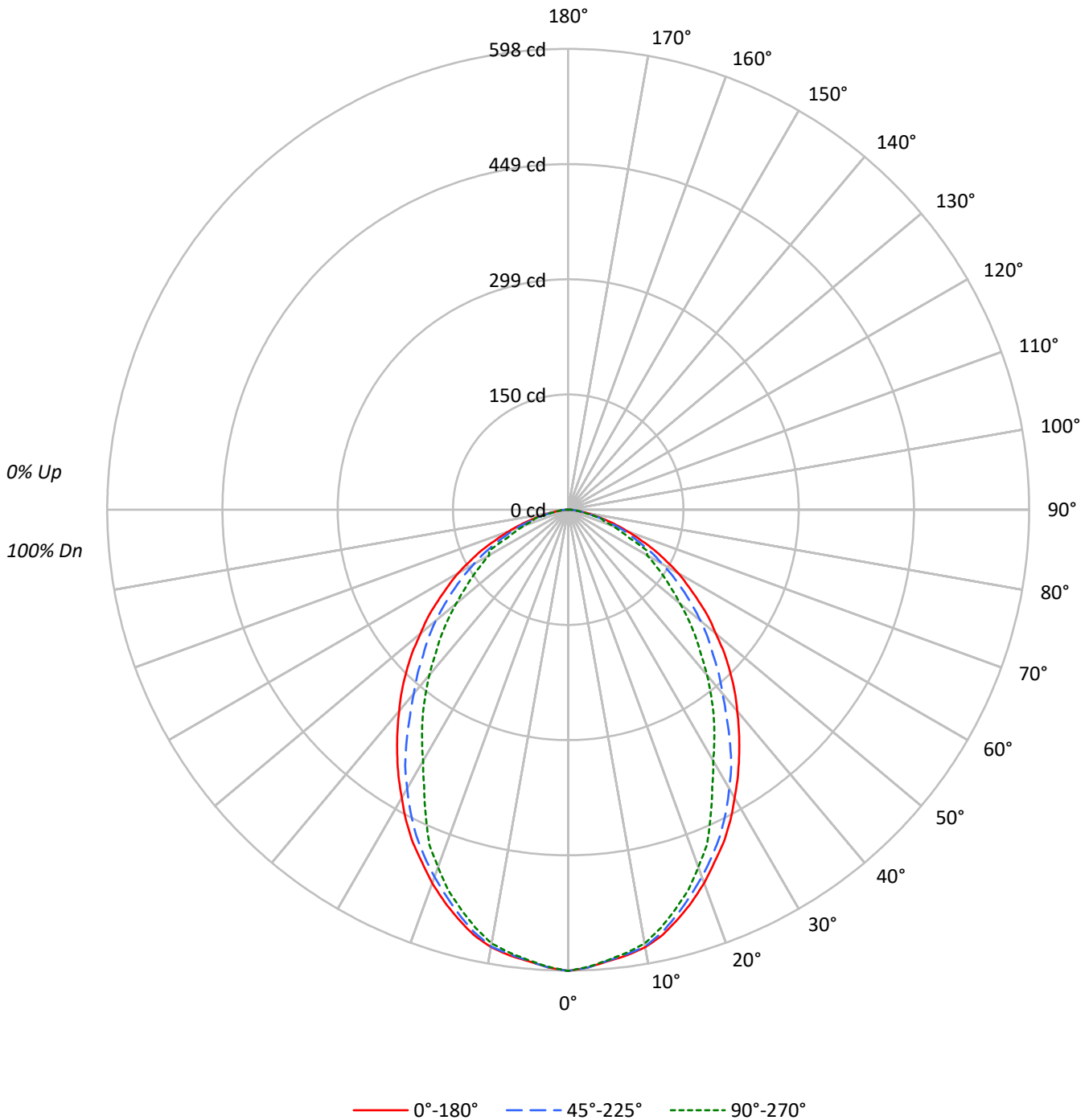
Lumens per Lamp: N/A  
Luminaire Lumens: 1175.0 lumens  
Efficiency: N/A  
Efficacy: 70.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3221	3221	3221
5°	3178	3174	3170
10°	3150	3146	3123
15°	3065	3034	2992
20°	2952	2905	2826
25°	2831	2770	2597
30°	2683	2597	2339
35°	2541	2400	2164
40°	2396	2188	1969
45°	2259	2022	1780
50°	2092	1877	1587
55°	1935	1701	1422
60°	1773	1520	1273
65°	1560	1331	1128
70°	1284	1164	958
75°	1021	892	936
80°	685	645	601
85°	426	513	599

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2259 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.7	4.7
10°-20°	152.9	13.0
20°-30°	211.7	18.0
30°-40°	225.7	19.2
40°-50°	205.9	17.5
50°-60°	161.3	13.7
60°-70°	105.2	8.9
70°-80°	46.6	4.0
80°-90°	10.0	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°	420.3	35.8
0°-40°	646.0	55.0
0°-60°	1013.3	86.2
0°-90°	1175.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1175.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	588	588	588	587	587	56
15°	550	550	545	539	537	155
25°	477	474	466	450	437	219
35°	387	384	365	338	329	242
45°	297	291	266	244	234	229
55°	206	200	181	160	152	185
65°	122	116	104	107	89	121
75°	49	46	43	41	45	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	598.5	598.5	598.5	598.5	598.5
2.5°	594.4	594.4	594.4	593.7	593.7
5°	588.2	587.5	587.5	586.8	586.8
7.5°	583.3	582.6	581.9	581.2	579.8
10°	576.4	576.4	575.7	572.2	571.5
12.5°	565.3	564.6	561.9	557.0	555.6
15°	550.1	550.1	544.6	539.0	536.9
17.5°	533.5	532.8	525.9	520.3	517.6
20°	515.5	514.1	507.2	498.2	493.4
22.5°	495.4	495.4	487.1	475.4	470.5
25°	476.7	474.0	466.4	449.8	437.3
27.5°	455.3	451.1	442.8	419.3	404.8
30°	431.8	429.7	417.9	387.5	376.4
32.5°	409.6	406.2	393.7	361.9	352.9
35°	386.8	384.0	365.3	337.7	329.4
37.5°	364.0	360.5	337.0	314.8	304.5
40°	341.1	337.0	311.4	291.3	280.2
42.5°	319.7	314.1	289.2	267.8	255.3
45°	296.8	290.6	265.7	243.6	233.9
47.5°	274.0	268.5	245.6	222.8	211.7
50°	249.8	244.9	224.2	201.4	189.6
52.5°	229.7	222.1	202.0	179.2	169.5
55°	206.2	200.0	181.3	159.8	151.5
57.5°	184.7	178.5	161.2	141.2	134.2
60°	164.7	155.7	141.2	123.9	118.3
62.5°	142.5	135.6	123.2	108.6	115.6
65°	122.5	115.6	104.5	106.6	88.6
67.5°	100.3	96.9	87.2	77.5	74.7
70°	81.6	77.5	74.0	63.7	60.9
72.5°	65.0	60.9	56.0	50.5	48.4
75°	49.1	45.7	42.9	40.8	45.0
77.5°	33.9	32.5	30.4	28.4	27.7
80°	22.1	21.5	20.8	20.1	19.4
82.5°	13.1	13.1	13.1	13.1	13.1
85°	6.9	7.6	8.3	9.0	9.7
87.5°	4.2	4.2	4.8	5.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)