

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: P558854

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558854  
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-LD4-1STD-35-UNV-81-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

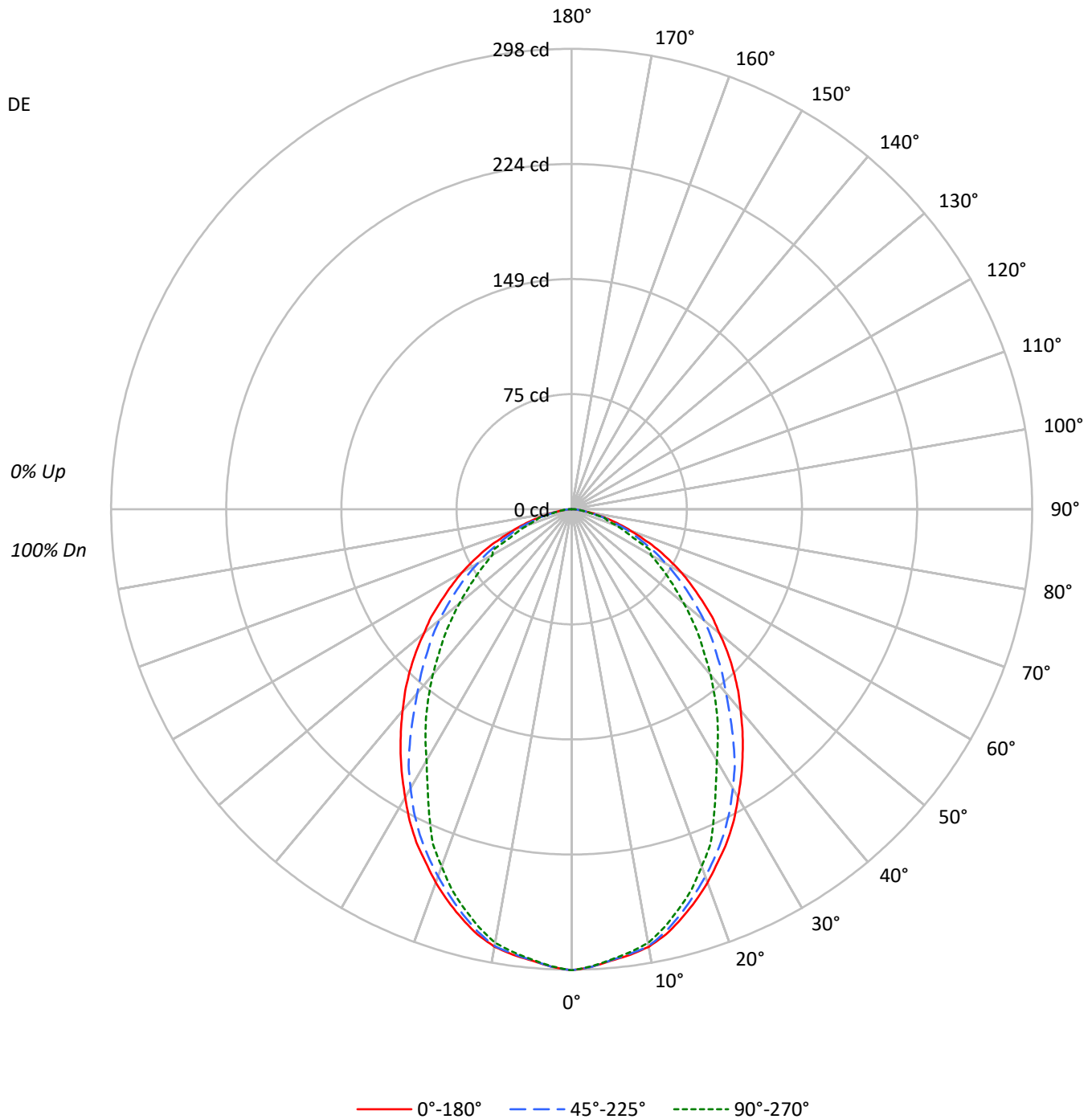
Lumens per Lamp: N/A  
Luminaire Lumens: 586.0 lumens  
Efficiency: N/A  
Efficacy: 70.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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				
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°	3213	3213	3213
5°	3169	3166	3162
10°	3142	3138	3115
15°	3057	3027	2984
20°	2945	2897	2818
25°	2824	2763	2590
30°	2676	2590	2333
35°	2535	2394	2159
40°	2390	2182	1964
45°	2253	2017	1775
50°	2087	1872	1584
55°	1929	1696	1419
60°	1767	1516	1270
65°	1556	1327	1126
70°	1281	1161	957
75°	1019	890	932
80°	682	645	601
85°	432	506	593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2253 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.8	4.7
10°-20°	76.3	13.0
20°-30°	105.6	18.0
30°-40°	112.6	19.2
40°-50°	102.7	17.5
50°-60°	80.5	13.7
60°-70°	52.4	8.9
70°-80°	23.2	4.0
80°-90°	5.0	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°	209.6	35.8
0°-40°	322.2	55.0
0°-60°	505.3	86.2
0°-90°	586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	586.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	298	298	298	298	298	
5°	293	293	293	293	293	28
15°	274	274	272	269	268	77
25°	238	236	233	224	218	109
35°	193	192	182	168	164	121
45°	148	145	132	122	117	114
55°	103	100	90	80	76	92
65°	61	58	52	53	44	60
75°	24	23	21	20	22	26
85°	4	4	4	4	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	298.5	298.5	298.5	298.5	298.5
2.5°	296.4	296.4	296.4	296.1	296.1
5°	293.3	293.0	293.0	292.6	292.6
7.5°	290.9	290.6	290.2	289.9	289.2
10°	287.5	287.5	287.1	285.4	285.0
12.5°	281.9	281.6	280.2	277.8	277.1
15°	274.3	274.3	271.6	268.8	267.8
17.5°	266.1	265.7	262.3	259.5	258.1
20°	257.1	256.4	252.9	248.5	246.0
22.5°	247.1	247.1	242.9	237.1	234.7
25°	237.8	236.4	232.6	224.3	218.1
27.5°	227.1	225.0	220.9	209.1	201.9
30°	215.3	214.3	208.4	193.2	187.7
32.5°	204.3	202.6	196.4	180.5	176.0
35°	192.9	191.5	182.2	168.4	164.3
37.5°	181.5	179.8	168.1	157.0	151.8
40°	170.1	168.1	155.3	145.3	139.8
42.5°	159.4	156.7	144.2	133.5	127.3
45°	148.0	144.9	132.5	121.5	116.6
47.5°	136.7	133.9	122.5	111.1	105.6
50°	124.6	122.2	111.8	100.4	94.6
52.5°	114.6	110.8	100.8	89.4	84.5
55°	102.8	99.7	90.4	79.7	75.6
57.5°	92.1	89.0	80.4	70.4	66.9
60°	82.1	77.6	70.4	61.8	59.0
62.5°	71.1	67.6	61.4	54.2	57.6
65°	61.1	57.6	52.1	53.1	44.2
67.5°	50.0	48.3	43.5	38.6	37.3
70°	40.7	38.6	36.9	31.7	30.4
72.5°	32.4	30.4	28.0	25.2	24.2
75°	24.5	22.8	21.4	20.4	22.4
77.5°	16.9	16.2	15.2	14.1	13.8
80°	11.0	10.7	10.4	10.0	9.7
82.5°	6.6	6.6	6.6	6.6	6.6
85°	3.5	3.8	4.1	4.5	4.8
87.5°	2.1	2.1	2.4	2.8	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)