

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: P559653

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-93-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559653  
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-LD4-1HI-35-UNV-93-86-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

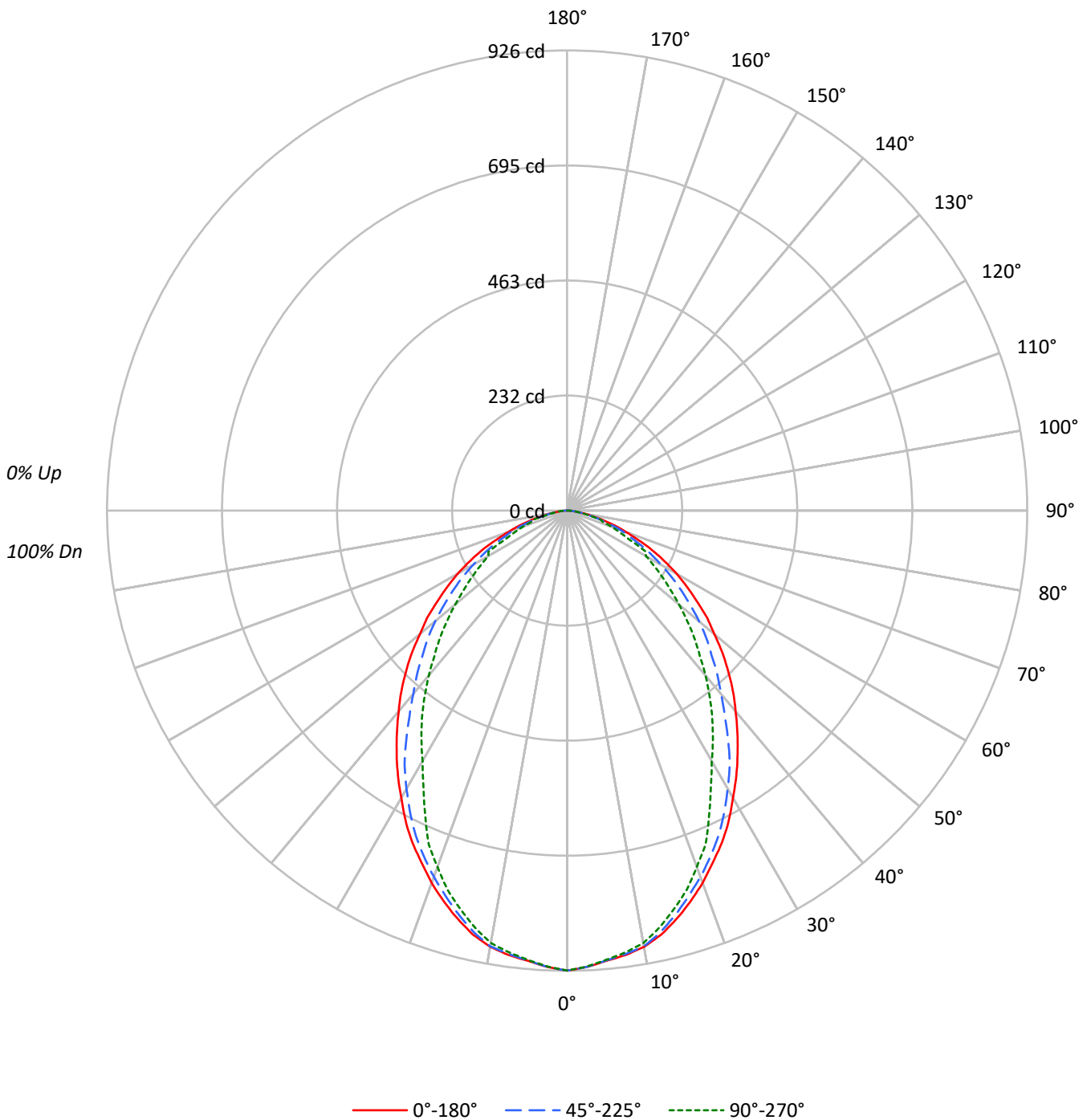
Lumens per Lamp: N/A  
Luminaire Lumens: 1817.0 lumens  
Efficiency: N/A  
Efficacy: 84.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4982	4982	4982
5°	4914	4908	4902
10°	4871	4865	4830
15°	4740	4692	4626
20°	4566	4492	4369
25°	4378	4283	4016
30°	4149	4016	3617
35°	3930	3712	3346
40°	3706	3383	3045
45°	3494	3127	2753
50°	3234	2903	2455
55°	2992	2630	2198
60°	2742	2350	1970
65°	2412	2058	1745
70°	1987	1802	1482
75°	1580	1379	1447
80°	1060	995	930
85°	661	790	926

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3494 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.2	4.7
10°-20°	236.4	13.0
20°-30°	327.3	18.0
30°-40°	349.1	19.2
40°-50°	318.4	17.5
50°-60°	249.5	13.7
60°-70°	162.6	8.9
70°-80°	72.0	4.0
80°-90°	15.5	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°	650.0	35.8
0°-40°	999.0	55.0
0°-60°	1566.9	86.2
0°-90°	1817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1817.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	926	926	926	926	926	
5°	910	908	908	907	907	86
15°	851	851	842	834	830	239
25°	737	733	721	696	676	338
35°	598	594	565	522	509	374
45°	459	449	411	377	362	354
55°	319	309	280	247	234	286
65°	189	179	162	165	137	187
75°	76	71	66	63	70	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	925.6	925.6	925.6	925.6	925.6
2.5°	919.1	919.1	919.1	918.1	918.1
5°	909.5	908.4	908.4	907.4	907.4
7.5°	902.0	900.9	899.9	898.8	896.7
10°	891.3	891.3	890.2	884.9	883.8
12.5°	874.2	873.1	868.8	861.4	859.2
15°	850.7	850.7	842.1	833.5	830.3
17.5°	825.0	823.9	813.2	804.6	800.4
20°	797.2	795.0	784.3	770.4	762.9
22.5°	766.1	766.1	753.3	735.1	727.6
25°	737.2	733.0	721.2	695.5	676.2
27.5°	704.1	697.6	684.8	648.4	626.0
30°	667.7	664.5	646.3	599.2	582.1
32.5°	633.4	628.1	608.8	559.6	545.7
35°	598.1	593.9	565.0	522.2	509.3
37.5°	562.8	557.5	521.1	486.9	470.8
40°	527.5	521.1	481.5	450.5	433.4
42.5°	494.3	485.8	447.3	414.1	394.8
45°	459.0	449.4	410.9	376.6	361.7
47.5°	423.7	415.2	379.9	344.5	327.4
50°	386.3	378.8	346.7	311.4	293.2
52.5°	355.2	343.5	312.4	277.1	262.2
55°	318.9	309.2	280.3	247.2	234.3
57.5°	285.7	276.1	249.3	218.3	207.6
60°	254.7	240.8	218.3	191.5	183.0
62.5°	220.4	209.7	190.5	168.0	178.7
65°	189.4	178.7	161.6	164.8	137.0
67.5°	155.2	149.8	134.8	119.8	115.6
70°	126.3	119.8	114.5	98.4	94.2
72.5°	100.6	94.2	86.7	78.1	74.9
75°	76.0	70.6	66.3	63.1	69.6
77.5°	52.4	50.3	47.1	43.9	42.8
80°	34.2	33.2	32.1	31.0	30.0
82.5°	20.3	20.3	20.3	20.3	20.3
85°	10.7	11.8	12.8	13.9	15.0
87.5°	6.4	6.4	7.5	8.6	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)