

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: P559647

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-82-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559647  
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-82-97-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

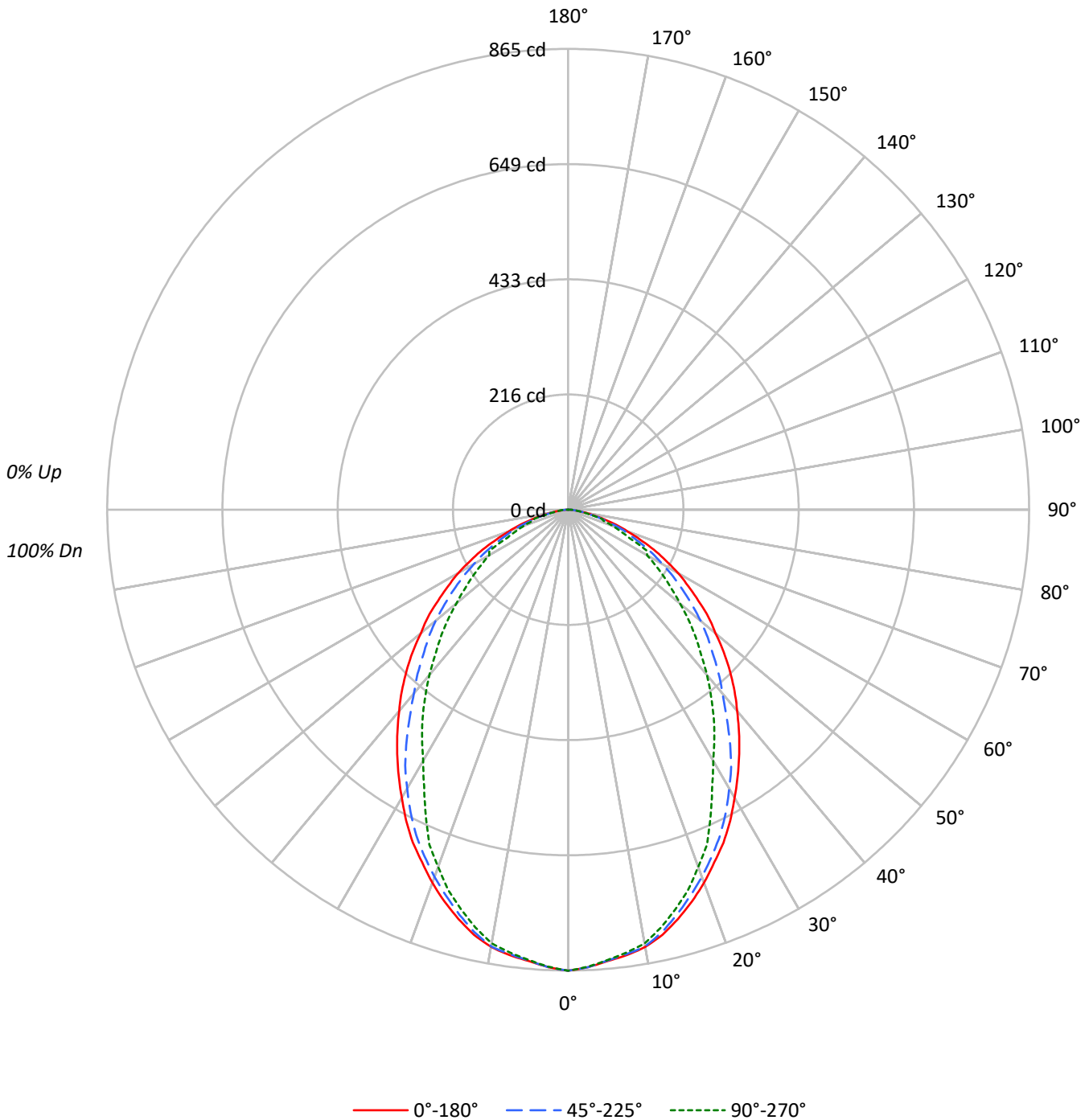
Lumens per Lamp: N/A  
Luminaire Lumens: 1699.0 lumens  
Efficiency: N/A  
Efficacy: 78.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4658	4658	4658
5°	4594	4589	4583
10°	4555	4549	4516
15°	4432	4387	4326
20°	4269	4200	4086
25°	4094	4004	3755
30°	3880	3755	3383
35°	3675	3471	3129
40°	3466	3163	2847
45°	3267	2924	2574
50°	3024	2714	2295
55°	2798	2459	2056
60°	2563	2197	1842
65°	2255	1924	1631
70°	1858	1685	1385
75°	1476	1289	1352
80°	992	930	868
85°	618	741	865

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3267 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.6	4.7
10°-20°	221.1	13.0
20°-30°	306.1	18.0
30°-40°	326.4	19.2
40°-50°	297.8	17.5
50°-60°	233.3	13.7
60°-70°	152.0	8.9
70°-80°	67.3	4.0
80°-90°	14.5	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°	607.7	35.8
0°-40°	934.1	55.0
0°-60°	1465.1	86.2
0°-90°	1699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1699.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	865	865	865	865	865	
5°	850	849	849	848	848	81
15°	795	795	787	779	776	224
25°	689	685	674	650	632	316
35°	559	555	528	488	476	350
45°	429	420	384	352	338	331
55°	298	289	262	231	219	267
65°	177	167	151	154	128	175
75°	71	66	62	59	65	76
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	865.4	865.4	865.4	865.4	865.4
2.5°	859.4	859.4	859.4	858.4	858.4
5°	850.4	849.4	849.4	848.4	848.4
7.5°	843.4	842.4	841.4	840.4	838.4
10°	833.4	833.4	832.4	827.4	826.4
12.5°	817.4	816.4	812.4	805.4	803.4
15°	795.4	795.4	787.4	779.4	776.4
17.5°	771.4	770.4	760.4	752.4	748.4
20°	745.4	743.4	733.4	720.4	713.4
22.5°	716.4	716.4	704.4	687.4	680.4
25°	689.4	685.4	674.3	650.3	632.3
27.5°	658.3	652.3	640.3	606.3	585.3
30°	624.3	621.3	604.3	560.3	544.3
32.5°	592.3	587.3	569.3	523.3	510.3
35°	559.3	555.3	528.3	488.3	476.2
37.5°	526.3	521.3	487.3	455.2	440.2
40°	493.3	487.3	450.2	421.2	405.2
42.5°	462.2	454.2	418.2	387.2	369.2
45°	429.2	420.2	384.2	352.2	338.2
47.5°	396.2	388.2	355.2	322.2	306.2
50°	361.2	354.2	324.2	291.2	274.1
52.5°	332.2	321.2	292.2	259.1	245.1
55°	298.2	289.1	262.1	231.1	219.1
57.5°	267.1	258.1	233.1	204.1	194.1
60°	238.1	225.1	204.1	179.1	171.1
62.5°	206.1	196.1	178.1	157.1	167.1
65°	177.1	167.1	151.1	154.1	128.1
67.5°	145.1	140.1	126.1	112.1	108.1
70°	118.1	112.1	107.1	92.0	88.0
72.5°	94.0	88.0	81.0	73.0	70.0
75°	71.0	66.0	62.0	59.0	65.0
77.5°	49.0	47.0	44.0	41.0	40.0
80°	32.0	31.0	30.0	29.0	28.0
82.5°	19.0	19.0	19.0	19.0	19.0
85°	10.0	11.0	12.0	13.0	14.0
87.5°	6.0	6.0	7.0	8.0	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)