

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: P560002

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-81-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560002  
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-35-UNV-81-85-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

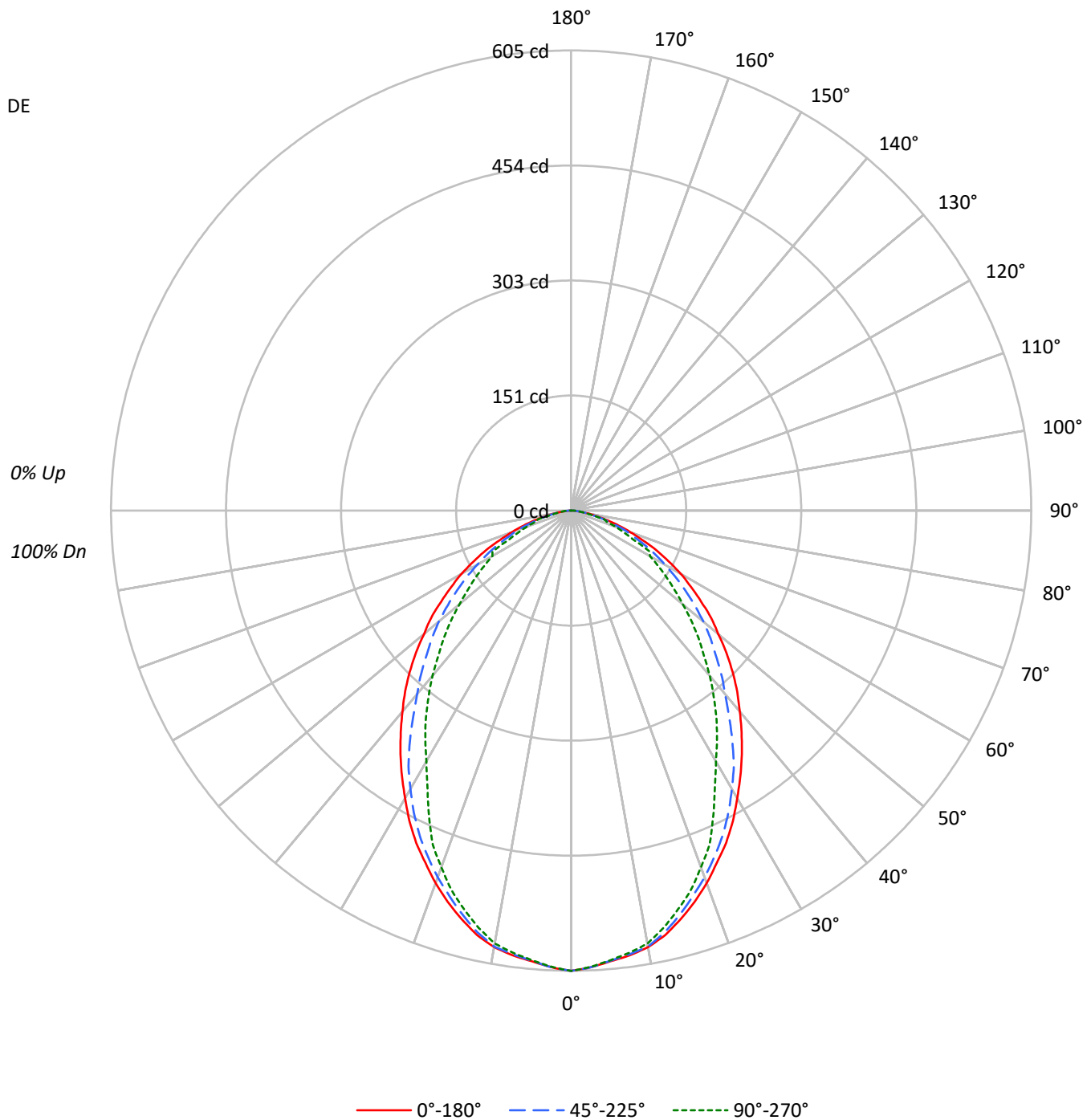
Lumens per Lamp: N/A  
Luminaire Lumens: 1188.0 lumens  
Efficiency: N/A  
Efficacy: 71.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3257	3257	3257
5°	3213	3209	3205
10°	3185	3181	3158
15°	3099	3068	3025
20°	2985	2937	2857
25°	2862	2800	2625
30°	2713	2626	2365
35°	2570	2427	2188
40°	2423	2212	1990
45°	2284	2044	1800
50°	2115	1898	1605
55°	1956	1720	1437
60°	1792	1536	1287
65°	1577	1345	1140
70°	1300	1179	969
75°	1033	902	946
80°	694	651	607
85°	432	519	605

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2284 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.3	4.7
10°-20°	154.6	13.0
20°-30°	214.0	18.0
30°-40°	228.2	19.2
40°-50°	208.2	17.5
50°-60°	163.1	13.7
60°-70°	106.3	8.9
70°-80°	47.1	4.0
80°-90°	10.1	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°	425.0	35.8
0°-40°	653.2	55.0
0°-60°	1024.5	86.2
0°-90°	1188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1188.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	605	605	605	605	605	
5°	595	594	594	593	593	56
15°	556	556	551	545	543	156
25°	482	479	472	455	442	221
35°	391	388	369	341	333	245
45°	300	294	269	246	236	231
55°	208	202	183	162	153	187
65°	124	117	106	108	90	122
75°	50	46	43	41	46	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°	605.2	605.2	605.2	605.2	605.2
2.5°	601.0	601.0	601.0	600.3	600.3
5°	594.7	594.0	594.0	593.3	593.3
7.5°	589.8	589.1	588.4	587.7	586.3
10°	582.8	582.8	582.1	578.6	577.9
12.5°	571.6	570.9	568.1	563.2	561.8
15°	556.2	556.2	550.6	545.0	542.9
17.5°	539.4	538.7	531.7	526.1	523.3
20°	521.2	519.8	512.8	503.7	498.8
22.5°	500.9	500.9	492.5	480.6	475.7
25°	482.0	479.2	471.5	454.7	442.1
27.5°	460.3	456.1	447.7	424.0	409.3
30°	436.5	434.4	422.6	391.8	380.6
32.5°	414.2	410.7	398.1	365.9	356.8
35°	391.1	388.3	369.4	341.4	333.0
37.5°	368.0	364.5	340.7	318.3	307.8
40°	344.9	340.7	314.8	294.5	283.3
42.5°	323.2	317.6	292.4	270.7	258.2
45°	300.1	293.8	268.6	246.3	236.5
47.5°	277.0	271.4	248.4	225.3	214.1
50°	252.6	247.7	226.7	203.6	191.7
52.5°	232.3	224.6	204.3	181.2	171.4
55°	208.5	202.2	183.3	161.6	153.2
57.5°	186.8	180.5	163.0	142.7	135.7
60°	166.5	157.4	142.7	125.2	119.6
62.5°	144.1	137.1	124.5	109.8	116.8
65°	123.8	116.8	105.6	107.7	89.5
67.5°	101.4	97.9	88.1	78.4	75.6
70°	82.6	78.4	74.9	64.4	61.6
72.5°	65.8	61.6	56.7	51.1	49.0
75°	49.7	46.2	43.4	41.3	45.5
77.5°	34.3	32.9	30.8	28.7	28.0
80°	22.4	21.7	21.0	20.3	19.6
82.5°	13.3	13.3	13.3	13.3	13.3
85°	7.0	7.7	8.4	9.1	9.8
87.5°	4.2	4.2	4.9	5.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)