

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: P560019

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-82-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560019  
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-82-85-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

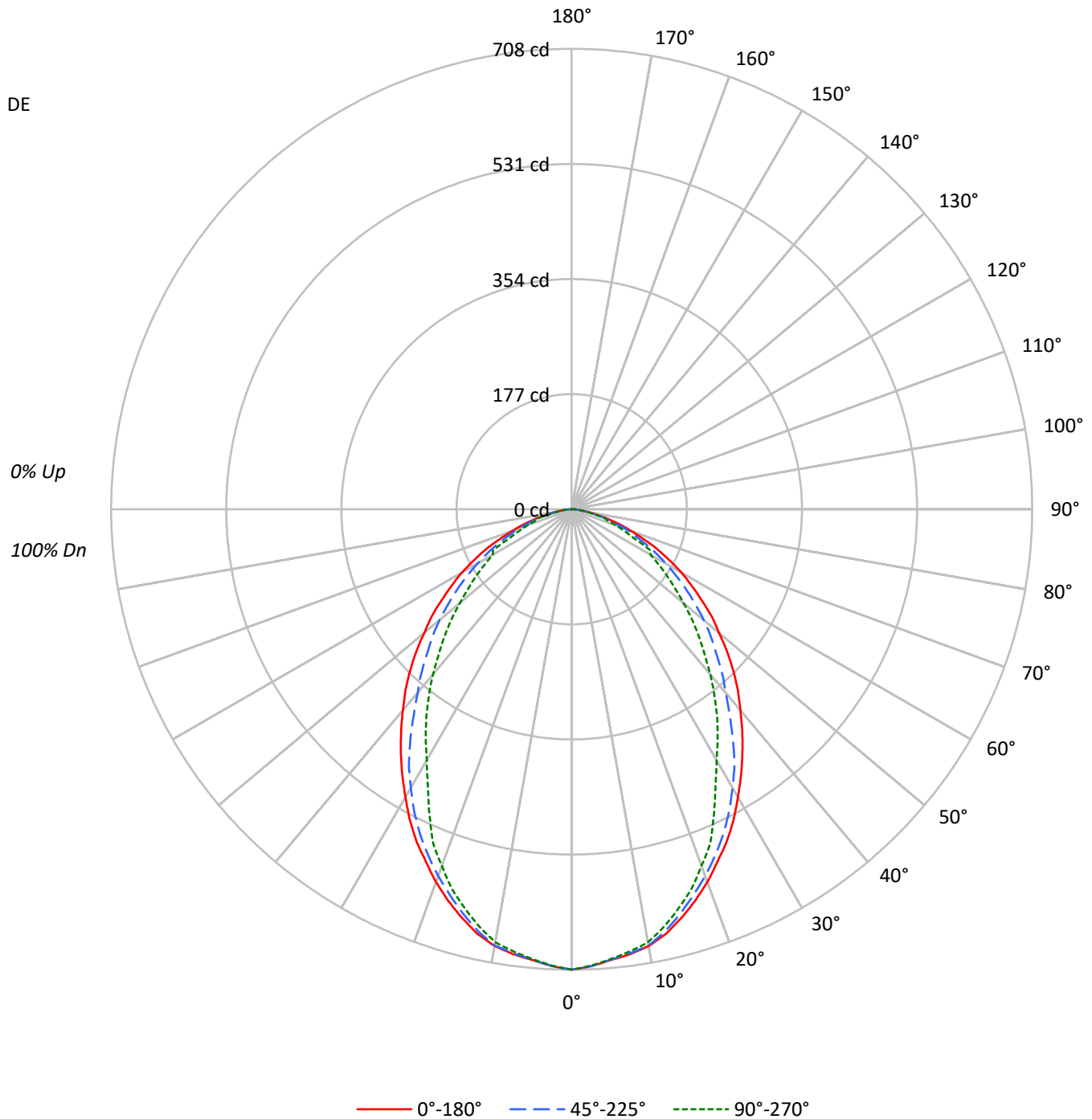
Lumens per Lamp: N/A  
Luminaire Lumens: 1390.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3810	3810	3810
5°	3759	3755	3750
10°	3727	3722	3695
15°	3626	3589	3539
20°	3493	3436	3342
25°	3349	3276	3072
30°	3174	3072	2767
35°	3007	2840	2560
40°	2835	2588	2329
45°	2673	2392	2106
50°	2474	2220	1878
55°	2289	2013	1682
60°	2097	1798	1507
65°	1845	1574	1335
70°	1520	1378	1133
75°	1208	1056	1106
80°	812	762	710
85°	506	605	710

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2673 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.9	4.7
10°-20°	180.9	13.0
20°-30°	250.4	18.0
30°-40°	267.0	19.2
40°-50°	243.6	17.5
50°-60°	190.9	13.7
60°-70°	124.4	8.9
70°-80°	55.1	4.0
80°-90°	11.8	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°	497.2	35.8
0°-40°	764.2	55.0
0°-60°	1198.7	86.2
0°-90°	1390.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1390.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	696	695	695	694	694	66
15°	651	651	644	638	635	183
25°	564	561	552	532	517	259
35°	458	454	432	400	390	286
45°	351	344	314	288	277	270
55°	244	237	214	189	179	219
65°	145	137	124	126	105	143
75°	58	54	51	48	53	62
85°	8	9	10	11	12	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	708.0	708.0	708.0	708.0	708.0
2.5°	703.1	703.1	703.1	702.3	702.3
5°	695.8	695.0	695.0	694.1	694.1
7.5°	690.0	689.2	688.4	687.6	685.9
10°	681.9	681.9	681.0	676.9	676.1
12.5°	668.8	667.9	664.7	658.9	657.3
15°	650.7	650.7	644.2	637.7	635.2
17.5°	631.1	630.3	622.1	615.6	612.3
20°	609.8	608.2	600.0	589.4	583.6
22.5°	586.1	586.1	576.3	562.3	556.6
25°	564.0	560.7	551.7	532.1	517.3
27.5°	538.6	533.7	523.9	496.0	478.9
30°	510.8	508.3	494.4	458.4	445.3
32.5°	484.6	480.5	465.8	428.1	417.5
35°	457.6	454.3	432.2	399.5	389.6
37.5°	430.6	426.5	398.6	372.4	360.2
40°	403.5	398.6	368.3	344.6	331.5
42.5°	378.2	371.6	342.2	316.8	302.0
45°	351.2	343.8	314.3	288.1	276.7
47.5°	324.1	317.6	290.6	263.6	250.5
50°	295.5	289.8	265.2	238.2	224.3
52.5°	271.8	262.8	239.0	212.0	200.5
55°	243.9	236.6	214.5	189.1	179.3
57.5°	218.6	211.2	190.7	167.0	158.8
60°	194.8	184.2	167.0	146.5	140.0
62.5°	168.6	160.4	145.7	128.5	136.7
65°	144.9	136.7	123.6	126.1	104.8
67.5°	118.7	114.6	103.1	91.7	88.4
70°	96.6	91.7	87.6	75.3	72.0
72.5°	76.9	72.0	66.3	59.8	57.3
75°	58.1	54.0	50.8	48.3	53.2
77.5°	40.1	38.5	36.0	33.6	32.7
80°	26.2	25.4	24.6	23.7	22.9
82.5°	15.6	15.6	15.6	15.6	15.6
85°	8.2	9.0	9.8	10.6	11.5
87.5°	4.9	4.9	5.7	6.5	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)