

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: P559301

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559301
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-LD4-2LO-40-UNV-81-86-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

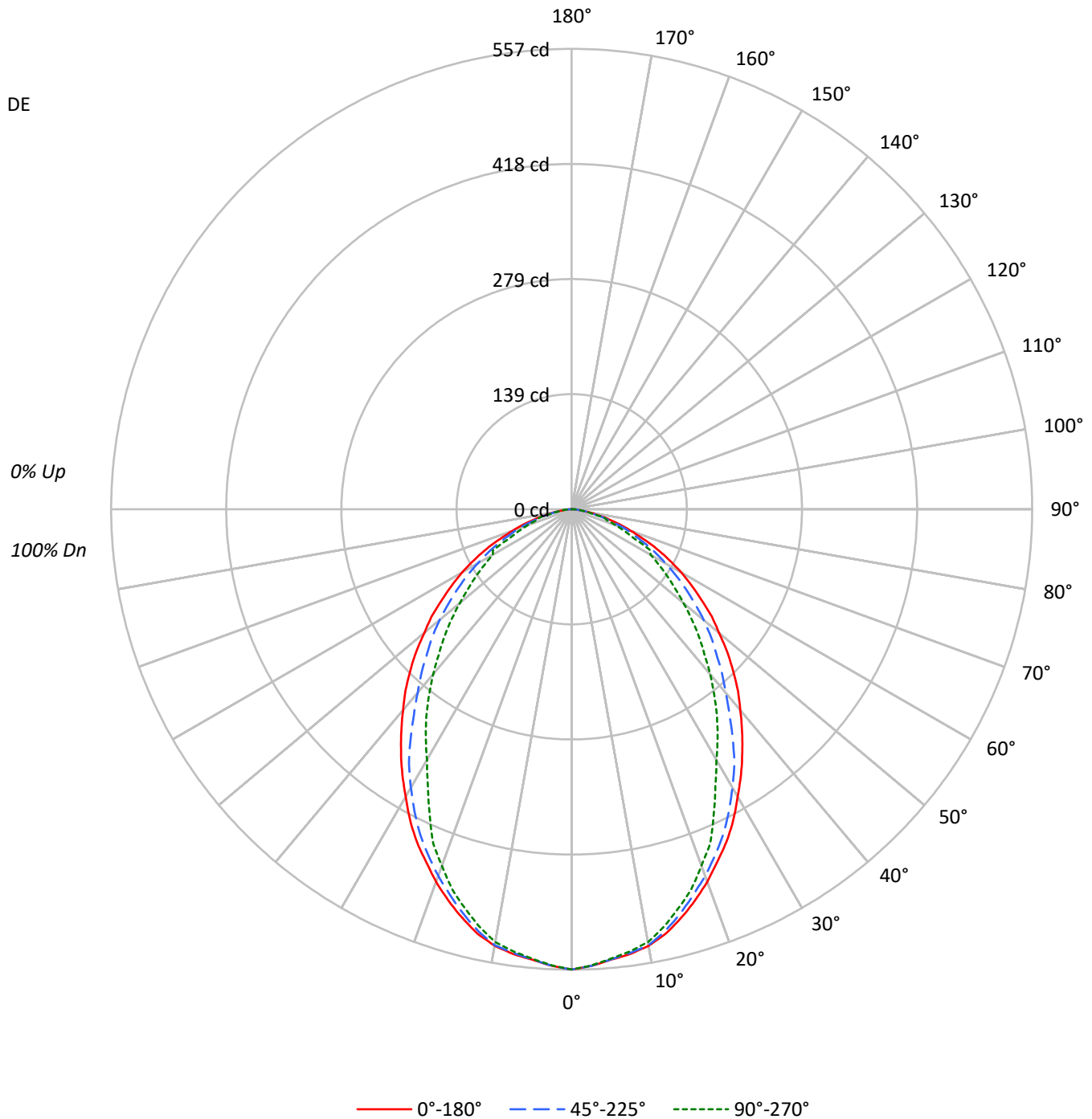
Lumens per Lamp: N/A
Luminaire Lumens: 1093.0 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	5993	5993	5993
5°	5911	5905	5897
10°	5861	5853	5811
15°	5702	5645	5566
20°	5493	5404	5257
25°	5267	5152	4831
30°	4992	4832	4351
35°	4728	4465	4026
40°	4458	4069	3663
45°	4203	3763	3312
50°	3892	3491	2954
55°	3599	3164	2646
60°	3298	2827	2370
65°	2901	2476	2099
70°	2392	2168	1781
75°	1901	1659	1738
80°	1277	1196	1116
85°	790	951	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4203 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.8	4.7
10°-20°	142.2	13.0
20°-30°	196.9	18.0
30°-40°	210.0	19.2
40°-50°	191.6	17.5
50°-60°	150.1	13.7
60°-70°	97.8	8.9
70°-80°	43.3	4.0
80°-90°	9.3	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°	391.0	35.8
0°-40°	600.9	55.0
0°-60°	942.6	86.2
0°-90°	1093.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1093.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	547	546	546	546	546	52
15°	512	512	507	501	500	144
25°	444	441	434	418	407	204
35°	360	357	340	314	306	225
45°	276	270	247	227	218	213
55°	192	186	169	149	141	172
65°	114	108	97	99	82	112
75°	46	42	40	38	42	49
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	556.8	556.8	556.8	556.8	556.8
2.5°	552.9	552.9	552.9	552.3	552.3
5°	547.1	546.5	546.5	545.8	545.8
7.5°	542.6	542.0	541.3	540.7	539.4
10°	536.2	536.2	535.5	532.3	531.7
12.5°	525.9	525.2	522.6	518.1	516.9
15°	511.7	511.7	506.6	501.4	499.5
17.5°	496.3	495.6	489.2	484.0	481.5
20°	479.5	478.2	471.8	463.4	458.9
22.5°	460.9	460.9	453.1	442.2	437.7
25°	443.5	440.9	433.8	418.4	406.8
27.5°	423.5	419.7	411.9	390.1	376.5
30°	401.6	399.7	388.8	360.4	350.1
32.5°	381.0	377.8	366.2	336.6	328.3
35°	359.8	357.2	339.8	314.1	306.4
37.5°	338.6	335.3	313.5	292.9	283.2
40°	317.3	313.5	289.6	271.0	260.7
42.5°	297.4	292.2	269.0	249.1	237.5
45°	276.1	270.3	247.2	226.6	217.6
47.5°	254.9	249.7	228.5	207.3	197.0
50°	232.4	227.9	208.5	187.3	176.4
52.5°	213.7	206.6	187.9	166.7	157.7
55°	191.8	186.0	168.6	148.7	141.0
57.5°	171.9	166.1	150.0	131.3	124.9
60°	153.2	144.8	131.3	115.2	110.1
62.5°	132.6	126.2	114.6	101.1	107.5
65°	113.9	107.5	97.2	99.1	82.4
67.5°	93.3	90.1	81.1	72.1	69.5
70°	76.0	72.1	68.9	59.2	56.6
72.5°	60.5	56.6	52.1	47.0	45.1
75°	45.7	42.5	39.9	38.0	41.8
77.5°	31.5	30.3	28.3	26.4	25.7
80°	20.6	20.0	19.3	18.7	18.0
82.5°	12.2	12.2	12.2	12.2	12.2
85°	6.4	7.1	7.7	8.4	9.0
87.5°	3.9	3.9	4.5	5.1	5.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)