

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: P559109

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559109
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-LD4-2HI-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: 1795.0 lumens
Efficiency: N/A
Efficacy: 83.1 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

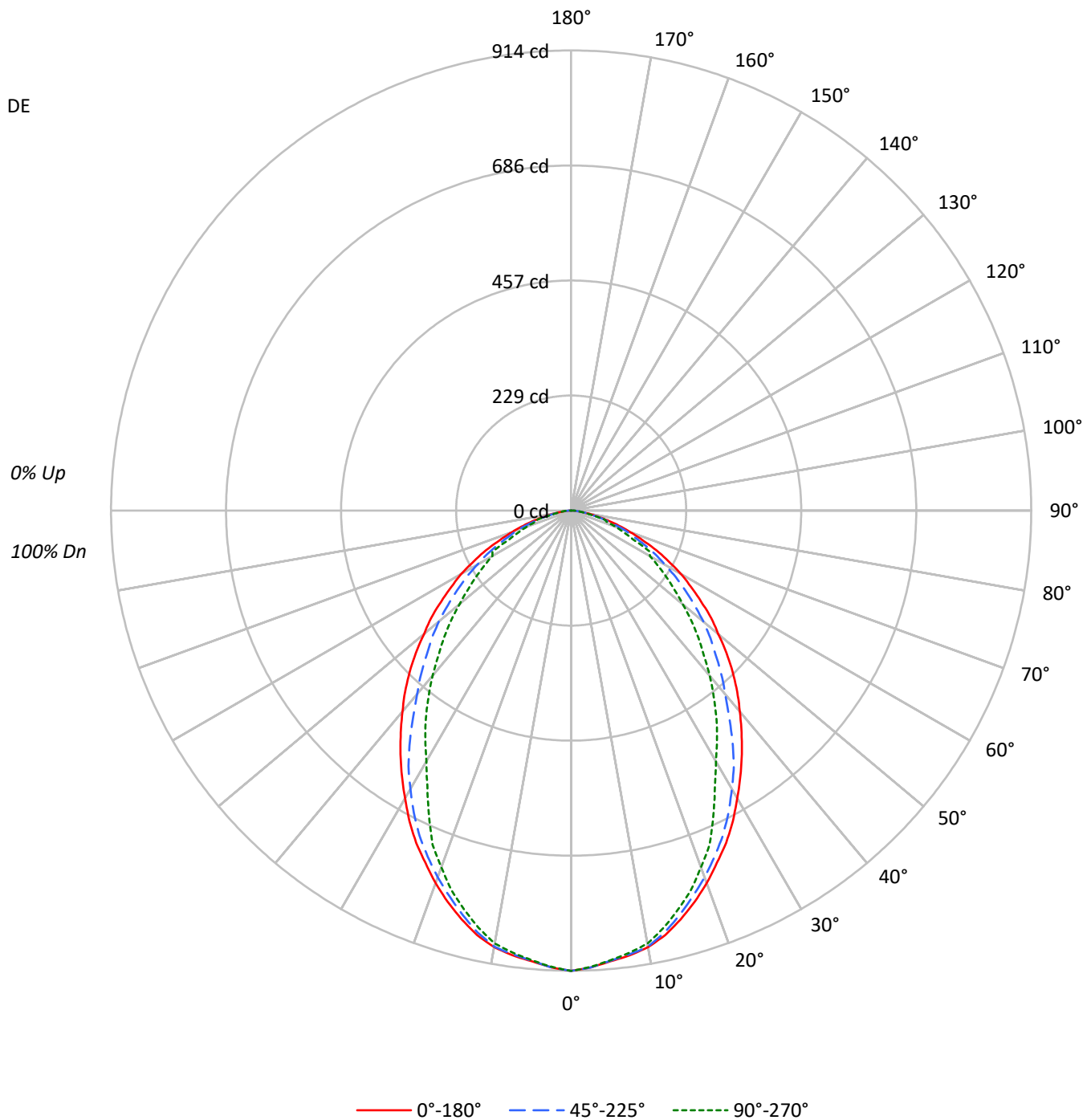
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	9841	9841	9841
5°	9708	9696	9686
10°	9624	9613	9543
15°	9365	9270	9141
20°	9021	8875	8633
25°	8650	8462	7935
30°	8198	7936	7147
35°	7765	7334	6612
40°	7322	6684	6015
45°	6903	6179	5439
50°	6390	5735	4850
55°	5911	5196	4344
60°	5416	4641	3892
65°	4765	4065	3446
70°	3925	3559	2927
75°	3123	2724	2857
80°	2095	1965	1835
85°	1309	1568	1828

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6903 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	4.7
10°-20°	233.6	13.0
20°-30°	323.4	18.0
30°-40°	344.8	19.2
40°-50°	314.6	17.5
50°-60°	246.4	13.7
60°-70°	160.6	8.9
70°-80°	71.2	4.0
80°-90°	15.3	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°	642.1	35.8
0°-40°	986.9	55.0
0°-60°	1547.9	86.2
0°-90°	1795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	898	897	897	896	896	85
15°	840	840	832	823	820	236
25°	728	724	712	687	668	334
35°	591	587	558	516	503	369
45°	454	444	406	372	357	349
55°	315	306	277	244	232	283
65°	187	176	160	163	135	184
75°	75	70	66	62	69	80
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°	914.3	914.3	914.3	914.3	914.3
2.5°	908.0	908.0	908.0	906.9	906.9
5°	898.5	897.4	897.4	896.4	896.4
7.5°	891.1	890.0	889.0	887.9	885.8
10°	880.5	880.5	879.5	874.2	873.1
12.5°	863.6	862.6	858.3	850.9	848.8
15°	840.4	840.4	831.9	823.4	820.3
17.5°	815.0	813.9	803.4	794.9	790.7
20°	787.5	785.4	774.8	761.1	753.7
22.5°	756.8	756.8	744.2	726.2	718.8
25°	728.3	724.1	712.5	687.1	668.1
27.5°	695.5	689.2	676.5	640.6	618.4
30°	659.6	656.4	638.5	591.9	575.0
32.5°	625.8	620.5	601.5	552.8	539.1
35°	590.9	586.7	558.1	515.8	503.2
37.5°	556.0	550.7	514.8	481.0	465.1
40°	521.1	514.8	475.7	445.0	428.1
42.5°	488.4	479.9	441.8	409.1	390.1
45°	453.5	444.0	405.9	372.1	357.3
47.5°	418.6	410.1	375.3	340.4	323.5
50°	381.6	374.2	342.5	307.6	289.6
52.5°	350.9	339.3	308.7	273.8	259.0
55°	315.0	305.5	276.9	244.2	231.5
57.5°	282.2	272.7	246.3	215.6	205.1
60°	251.6	237.8	215.6	189.2	180.8
62.5°	217.8	207.2	188.2	166.0	176.5
65°	187.1	176.5	159.6	162.8	135.3
67.5°	153.3	148.0	133.2	118.4	114.2
70°	124.7	118.4	113.1	97.2	93.0
72.5°	99.4	93.0	85.6	77.2	74.0
75°	75.1	69.8	65.5	62.4	68.7
77.5°	51.8	49.7	46.5	43.3	42.3
80°	33.8	32.8	31.7	30.7	29.6
82.5°	20.1	20.1	20.1	20.1	20.1
85°	10.6	11.6	12.7	13.7	14.8
87.5°	6.3	6.3	7.4	8.5	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)