

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: P559706

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559706
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-40-UNV-82-94-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1480.0 lumens
Efficiency: N/A
Efficacy: 68.5 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

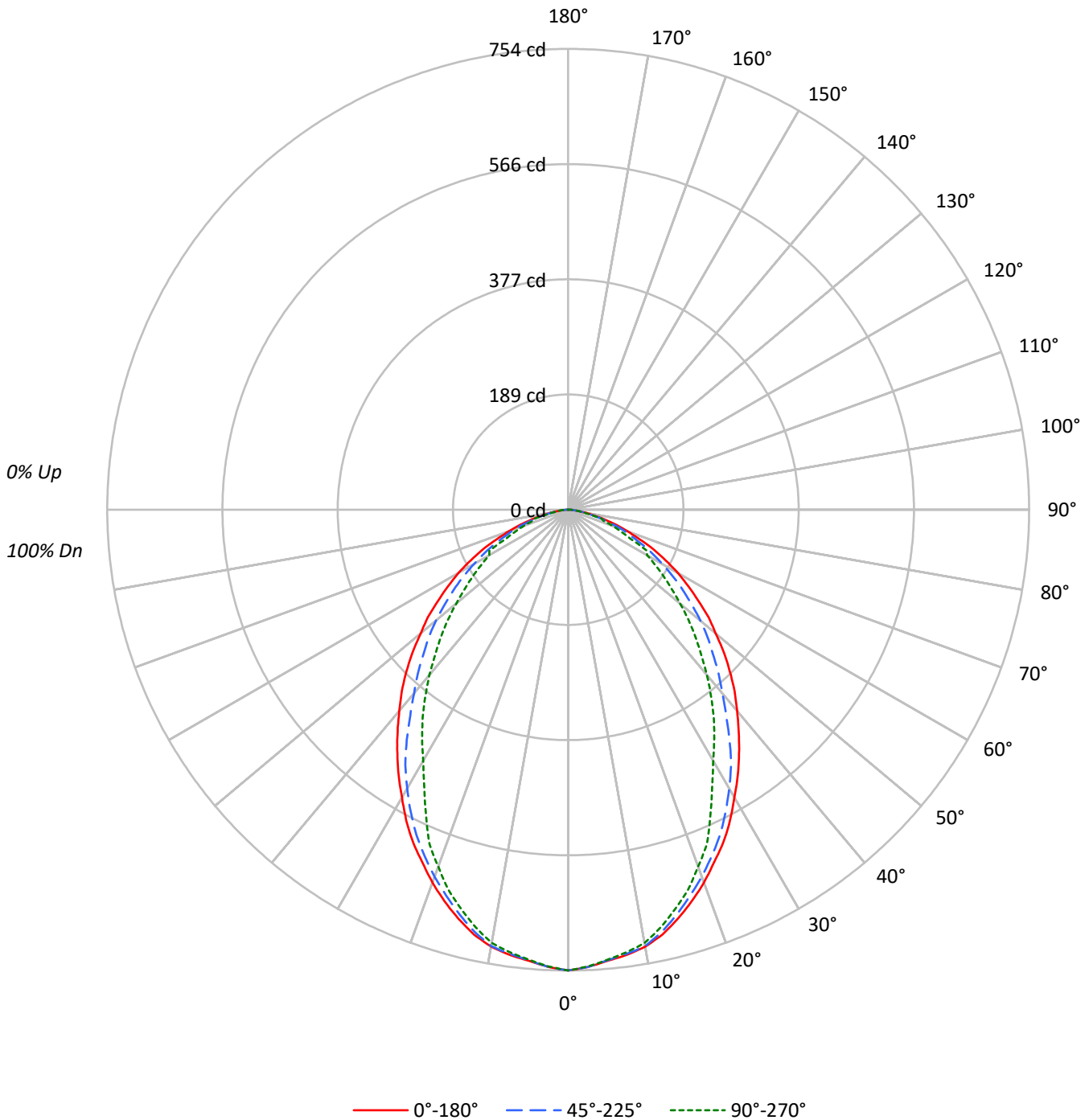
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4057	4057	4057
5°	4002	3997	3993
10°	3968	3963	3934
15°	3861	3822	3768
20°	3719	3659	3559
25°	3566	3488	3271
30°	3379	3271	2946
35°	3201	3024	2726
40°	3019	2755	2480
45°	2846	2547	2242
50°	2634	2364	1999
55°	2437	2142	1791
60°	2232	1914	1604
65°	1965	1676	1421
70°	1618	1468	1207
75°	1287	1123	1179
80°	865	809	756
85°	537	648	753

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2846 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.2	4.7
10°-20°	192.6	13.0
20°-30°	266.6	18.0
30°-40°	284.3	19.2
40°-50°	259.4	17.5
50°-60°	203.2	13.7
60°-70°	132.4	8.9
70°-80°	58.7	4.0
80°-90°	12.6	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°	529.4	35.8
0°-40°	813.7	55.0
0°-60°	1276.3	86.2
0°-90°	1480.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1480.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	754	754	754	754	754	
5°	741	740	740	739	739	70
15°	693	693	686	679	676	195
25°	600	597	587	566	551	276
35°	487	484	460	425	415	305
45°	374	366	335	307	295	288
55°	260	252	228	201	191	233
65°	154	146	132	134	112	152
75°	62	58	54	51	57	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	753.9	753.9	753.9	753.9	753.9
2.5°	748.7	748.7	748.7	747.8	747.8
5°	740.8	739.9	739.9	739.1	739.1
7.5°	734.7	733.8	733.0	732.1	730.4
10°	726.0	726.0	725.1	720.8	719.9
12.5°	712.1	711.2	707.7	701.6	699.9
15°	692.9	692.9	685.9	678.9	676.3
17.5°	672.0	671.1	662.4	655.4	651.9
20°	649.3	647.6	638.8	627.5	621.4
22.5°	624.0	624.0	613.6	598.8	592.7
25°	600.5	597.0	587.4	566.5	550.8
27.5°	573.5	568.3	557.8	528.2	509.9
30°	543.8	541.2	526.4	488.1	474.1
32.5°	516.0	511.6	495.9	455.8	444.5
35°	487.2	483.7	460.2	425.3	414.9
37.5°	458.4	454.1	424.4	396.6	383.5
40°	429.7	424.4	392.2	366.9	353.0
42.5°	402.7	395.7	364.3	337.3	321.6
45°	373.9	366.1	334.7	306.8	294.6
47.5°	345.1	338.2	309.4	280.6	266.7
50°	314.6	308.5	282.4	253.6	238.8
52.5°	289.4	279.8	254.5	225.7	213.5
55°	259.7	251.9	228.3	201.3	190.9
57.5°	232.7	224.9	203.1	177.8	169.1
60°	207.4	196.1	177.8	156.0	149.0
62.5°	179.5	170.8	155.1	136.8	145.5
65°	154.3	145.5	131.6	134.2	111.6
67.5°	126.4	122.0	109.8	97.6	94.1
70°	102.8	97.6	93.3	80.2	76.7
72.5°	81.9	76.7	70.6	63.6	61.0
75°	61.9	57.5	54.0	51.4	56.7
77.5°	42.7	41.0	38.3	35.7	34.9
80°	27.9	27.0	26.1	25.3	24.4
82.5°	16.6	16.6	16.6	16.6	16.6
85°	8.7	9.6	10.5	11.3	12.2
87.5°	5.2	5.2	6.1	7.0	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)