

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: P559117

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559117
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-81-96-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1836.0 lumens
Efficiency: N/A
Efficacy: 85.0 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

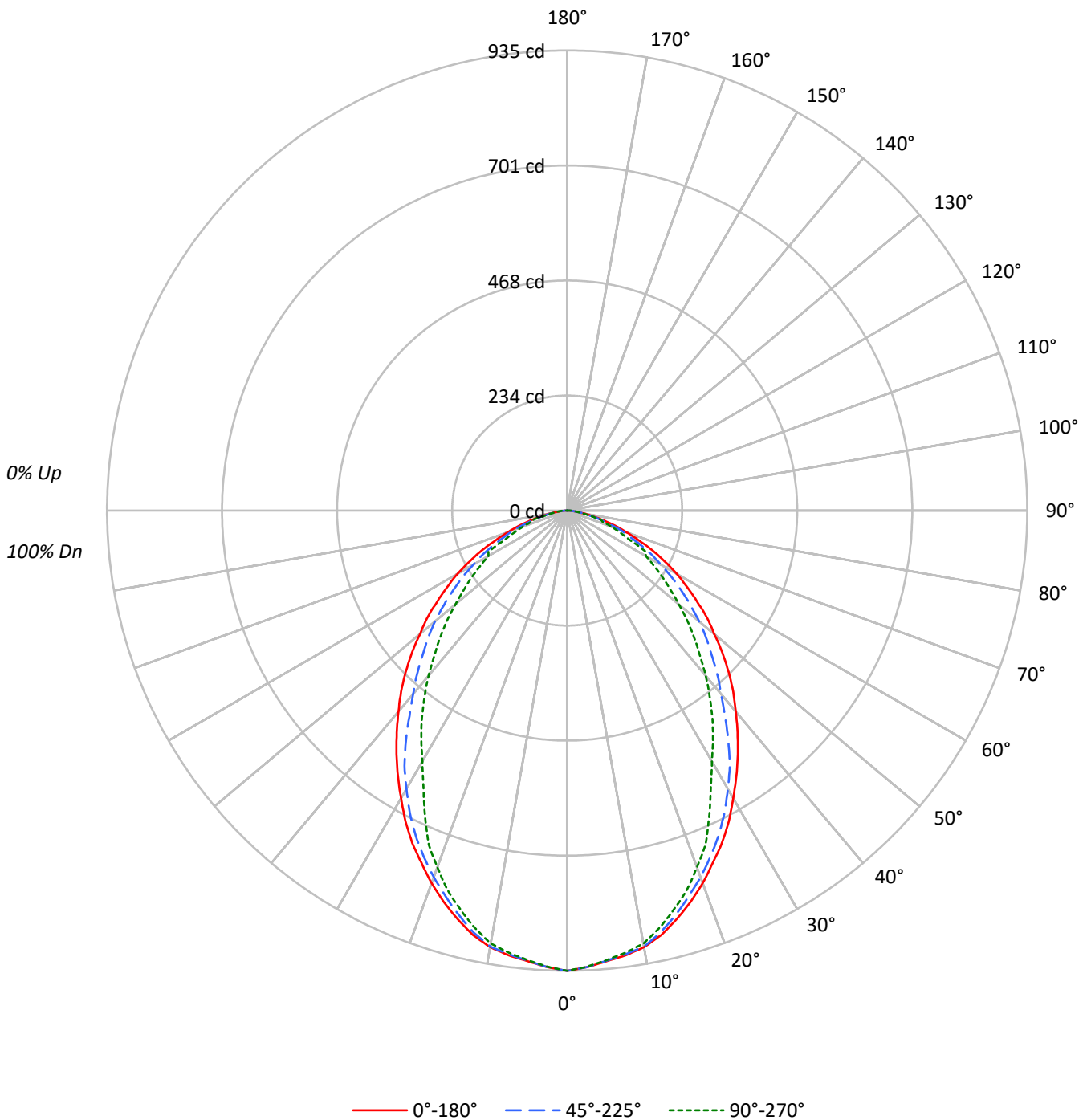
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10066	10066	10066
5°	9930	9918	9907
10°	9844	9833	9762
15°	9579	9482	9350
20°	9227	9078	8830
25°	8847	8655	8115
30°	8386	8116	7311
35°	7942	7502	6762
40°	7489	6836	6153
45°	7060	6320	5562
50°	6536	5866	4960
55°	6047	5316	4444
60°	5539	4749	3980
65°	4875	4159	3525
70°	4016	3641	2993
75°	3194	2786	2924
80°	2145	2008	1878
85°	1334	1606	1865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7060 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	4.7
10°-20°	238.9	13.0
20°-30°	330.8	18.0
30°-40°	352.7	19.2
40°-50°	321.8	17.5
50°-60°	252.1	13.7
60°-70°	164.3	8.9
70°-80°	72.8	4.0
80°-90°	15.6	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°	656.8	35.8
0°-40°	1009.4	55.0
0°-60°	1583.3	86.2
0°-90°	1836.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1836.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	935	935	935	935	935	
5°	919	918	918	917	917	87
15°	860	860	851	842	839	242
25°	745	741	729	703	683	342
35°	604	600	571	528	515	378
45°	464	454	415	381	365	357
55°	322	312	283	250	237	289
65°	191	181	163	166	138	189
75°	77	71	67	64	70	82
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°	935.2	935.2	935.2	935.2	935.2
2.5°	928.7	928.7	928.7	927.7	927.7
5°	919.0	917.9	917.9	916.9	916.9
7.5°	911.4	910.4	909.3	908.2	906.0
10°	900.6	900.6	899.6	894.1	893.1
12.5°	883.3	882.3	877.9	870.4	868.2
15°	859.6	859.6	850.9	842.3	839.0
17.5°	833.6	832.5	821.7	813.1	808.7
20°	805.5	803.3	792.5	778.5	770.9
22.5°	774.1	774.1	761.2	742.8	735.2
25°	744.9	740.6	728.7	702.8	683.3
27.5°	711.4	704.9	692.0	655.2	632.5
30°	674.7	671.4	653.0	605.5	588.2
32.5°	640.1	634.7	615.2	565.5	551.4
35°	604.4	600.1	570.9	527.6	514.6
37.5°	568.7	563.3	526.5	491.9	475.7
40°	533.0	526.5	486.5	455.2	437.9
42.5°	499.5	490.9	451.9	418.4	399.0
45°	463.8	454.1	415.2	380.6	365.4
47.5°	428.2	419.5	383.8	348.1	330.8
50°	390.3	382.7	350.3	314.6	296.2
52.5°	359.0	347.1	315.7	280.0	264.9
55°	322.2	312.5	283.3	249.8	236.8
57.5°	288.7	278.9	251.9	220.6	209.8
60°	257.3	243.3	220.6	193.5	184.9
62.5°	222.7	211.9	192.5	169.7	180.6
65°	191.4	180.6	163.3	166.5	138.4
67.5°	156.8	151.4	136.2	121.1	116.8
70°	127.6	121.1	115.7	99.5	95.1
72.5°	101.6	95.1	87.6	78.9	75.7
75°	76.8	71.4	67.0	63.8	70.3
77.5°	53.0	50.8	47.6	44.3	43.2
80°	34.6	33.5	32.4	31.4	30.3
82.5°	20.5	20.5	20.5	20.5	20.5
85°	10.8	11.9	13.0	14.1	15.1
87.5°	6.5	6.5	7.6	8.6	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)