

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: P559878

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559878
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-LD4-1LO-40-UNV-81-87-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 861.0 lumens
Efficiency: N/A
Efficacy: 73.6 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

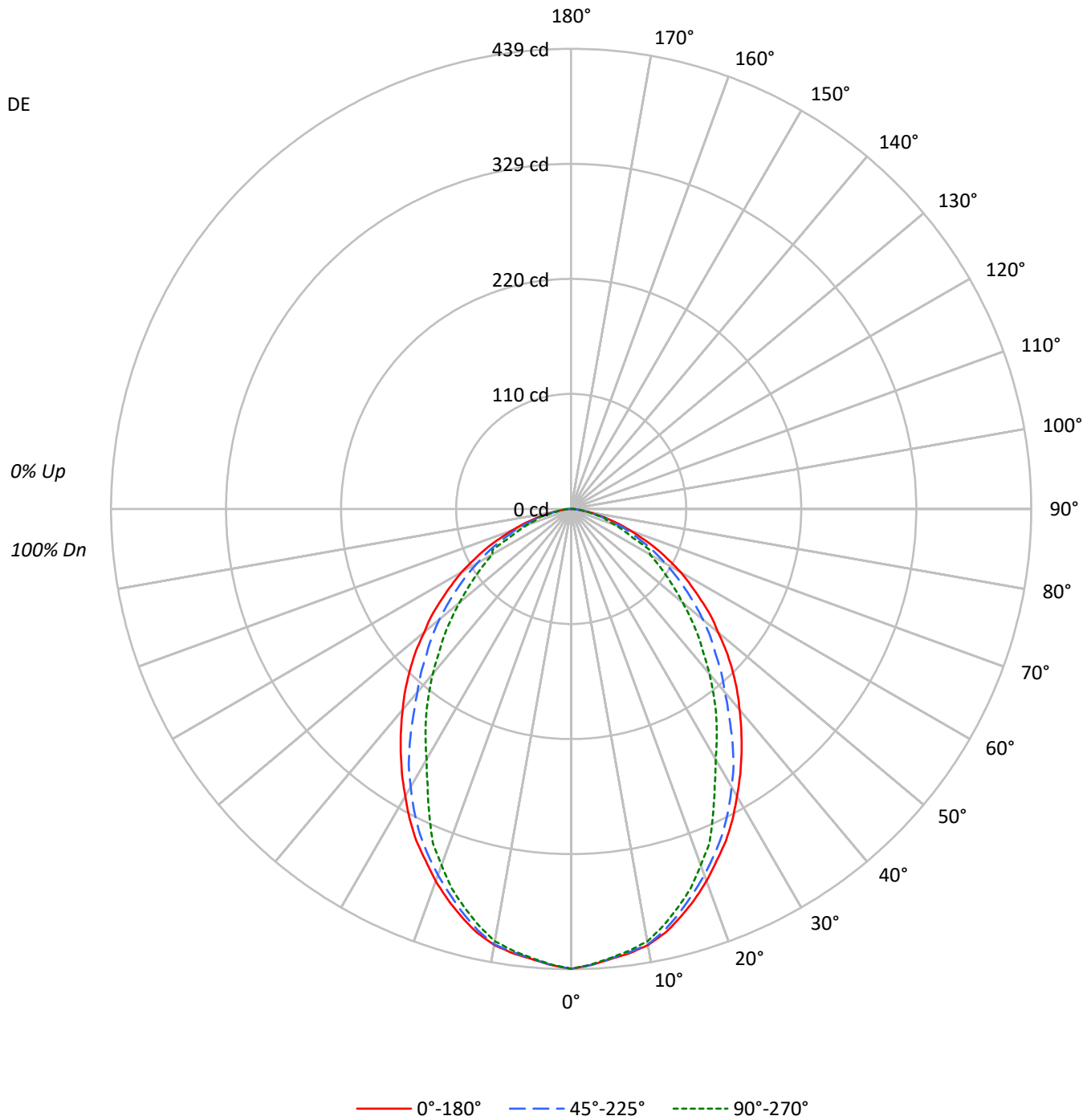
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2361	2361	2361
5°	2328	2326	2323
10°	2308	2305	2289
15°	2246	2223	2193
20°	2163	2129	2070
25°	2074	2029	1903
30°	1966	1903	1714
35°	1862	1759	1585
40°	1756	1603	1442
45°	1655	1482	1305
50°	1532	1376	1163
55°	1418	1246	1042
60°	1299	1113	933
65°	1142	975	826
70°	941	854	702
75°	749	653	686
80°	502	471	440
85°	315	377	438

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1655 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.8	4.7
10°-20°	112.0	13.0
20°-30°	155.1	18.0
30°-40°	165.4	19.2
40°-50°	150.9	17.5
50°-60°	118.2	13.7
60°-70°	77.1	8.9
70°-80°	34.1	4.0
80°-90°	7.3	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°	308.0	35.8
0°-40°	473.4	55.0
0°-60°	742.5	86.2
0°-90°	861.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	861.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	439	439	439	439	439	
5°	431	430	430	430	430	41
15°	403	403	399	395	394	113
25°	349	347	342	330	320	160
35°	283	281	268	247	241	177
45°	218	213	195	178	171	168
55°	151	146	133	117	111	136
65°	90	85	77	78	65	88
75°	36	34	31	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	438.6	438.6	438.6	438.6	438.6
2.5°	435.5	435.5	435.5	435.0	435.0
5°	431.0	430.5	430.5	430.0	430.0
7.5°	427.4	426.9	426.4	425.9	424.9
10°	422.4	422.4	421.8	419.3	418.8
12.5°	414.2	413.7	411.7	408.2	407.1
15°	403.1	403.1	399.0	395.0	393.5
17.5°	390.9	390.4	385.3	381.3	379.3
20°	377.7	376.7	371.7	365.1	361.5
22.5°	363.0	363.0	356.9	348.3	344.8
25°	349.3	347.3	341.7	329.6	320.4
27.5°	333.6	330.6	324.5	307.3	296.6
30°	316.4	314.9	306.2	283.9	275.8
32.5°	300.2	297.6	288.5	265.2	258.6
35°	283.4	281.4	267.7	247.4	241.3
37.5°	266.7	264.2	246.9	230.7	223.1
40°	250.0	246.9	228.2	213.5	205.3
42.5°	234.2	230.2	211.9	196.2	187.1
45°	217.5	213.0	194.7	178.5	171.4
47.5°	200.8	196.7	180.0	163.3	155.2
50°	183.0	179.5	164.3	147.5	138.9
52.5°	168.3	162.8	148.1	131.3	124.2
55°	151.1	146.5	132.8	117.1	111.0
57.5°	135.4	130.8	118.1	103.4	98.4
60°	120.7	114.1	103.4	90.8	86.7
62.5°	104.4	99.4	90.3	79.6	84.7
65°	89.7	84.7	76.6	78.1	64.9
67.5°	73.5	71.0	63.9	56.8	54.8
70°	59.8	56.8	54.3	46.6	44.6
72.5°	47.7	44.6	41.1	37.0	35.5
75°	36.0	33.5	31.4	29.9	33.0
77.5°	24.8	23.8	22.3	20.8	20.3
80°	16.2	15.7	15.2	14.7	14.2
82.5°	9.6	9.6	9.6	9.6	9.6
85°	5.1	5.6	6.1	6.6	7.1
87.5°	3.0	3.0	3.5	4.1	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)