

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055291

Luminaire Tested: S122R3DR-H1005D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055291
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H1005D927-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

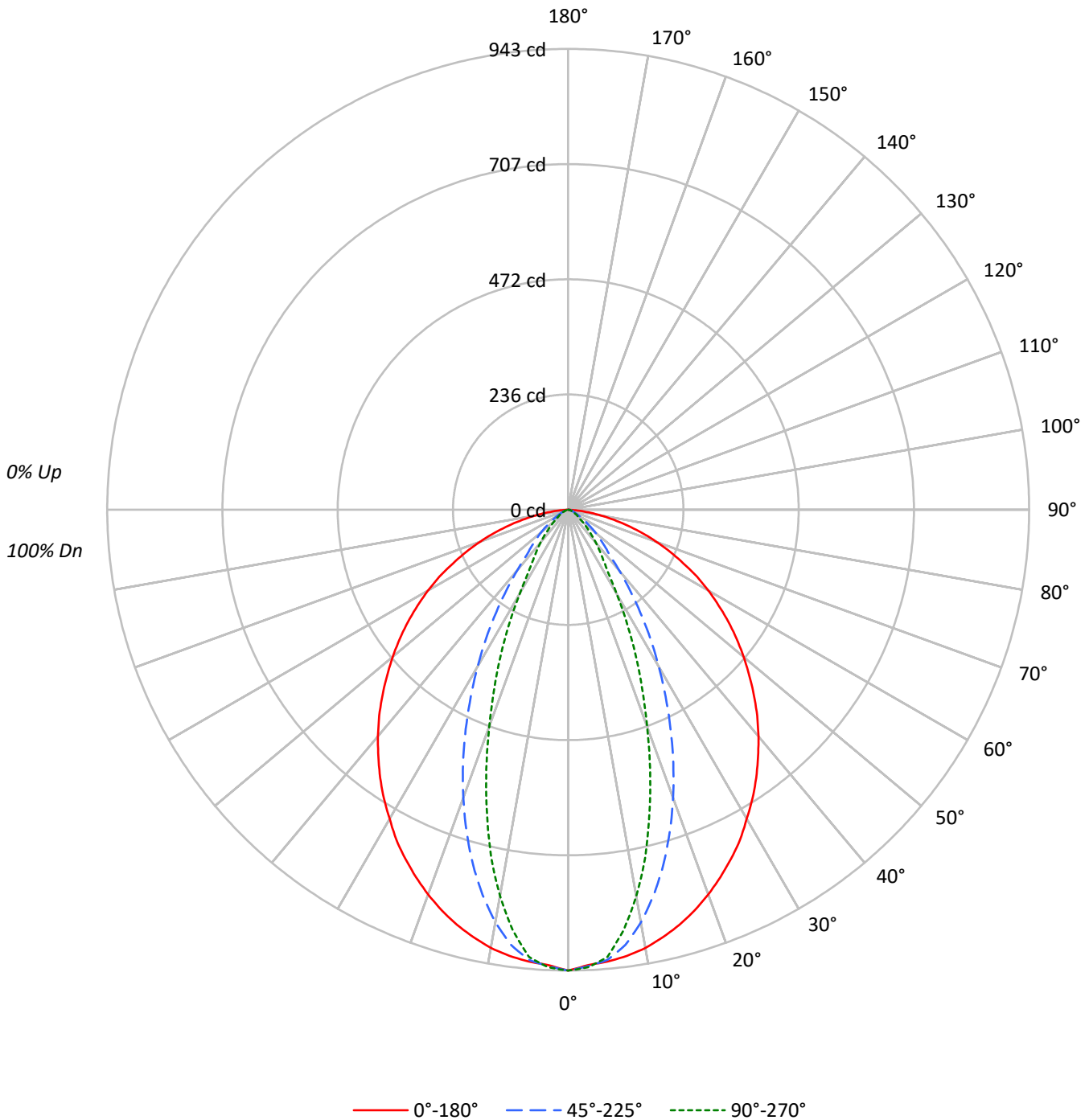
Lumens per Lamp: N/A
Luminaire Lumens: 1080.8 lumens
Efficiency: N/A
Efficacy: 29.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17868	17868	17868
5°	17649	17584	17474
10°	17520	16497	15452
15°	17251	14758	12604
20°	16894	12652	9506
25°	16477	10364	6790
30°	15979	8090	4323
35°	15503	5935	2886
40°	14978	4002	2171
45°	14399	2819	1549
50°	13797	2146	1091
55°	13209	1490	803
60°	12569	1008	656
65°	11656	726	520
70°	10625	576	449
75°	9223	505	337
80°	7310	382	382
85°	4022	500	261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14399 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	8.0
10°-20°	211.6	19.6
20°-30°	241.8	22.4
30°-40°	205.0	19.0
40°-50°	153.0	14.2
50°-60°	98.9	9.1
60°-70°	55.1	5.1
70°-80°	24.2	2.2
80°-90°	5.0	0.5
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°	539.6	49.9
0°-40°	744.6	68.9
0°-60°	996.4	92.2
0°-90°	1080.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1080.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	928	940	925	915	919	88
15°	880	858	752	673	643	248
25°	788	696	496	363	325	363
35°	670	505	257	140	125	419
45°	537	319	105	68	58	415
55°	400	151	45	28	24	358
65°	260	56	16	13	12	258
75°	126	12	7	6	5	134
85°	18	1	2	1	1	26
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	943.1	943.1	943.1	943.1	943.1
2.5°	932.6	946.5	935.0	935.0	937.3
5°	928.0	939.6	924.6	915.3	918.8
7.5°	921.1	929.2	898.0	870.2	867.9
10°	910.7	914.2	857.5	814.8	803.2
12.5°	895.7	887.6	807.8	747.7	728.1
15°	879.5	857.5	752.4	672.6	642.6
17.5°	859.8	820.5	691.1	594.0	557.0
20°	837.9	782.4	627.5	512.0	471.5
22.5°	813.6	739.6	561.7	434.5	394.1
25°	788.2	695.7	495.8	362.9	324.8
27.5°	761.6	649.5	431.1	298.2	256.6
30°	730.4	602.1	369.8	235.8	197.6
32.5°	701.5	552.4	313.2	182.6	150.2
35°	670.3	505.0	256.6	139.8	124.8
37.5°	637.9	457.7	206.9	117.9	105.2
40°	605.6	410.3	161.8	99.4	87.8
42.5°	572.1	364.0	124.8	83.2	71.7
45°	537.4	319.0	105.2	68.2	57.8
47.5°	502.7	273.9	87.8	54.3	46.2
50°	468.1	231.1	72.8	42.8	37.0
52.5°	434.5	190.7	57.8	34.7	30.0
55°	399.9	151.4	45.1	27.7	24.3
57.5°	365.2	117.9	34.7	23.1	20.8
60°	331.7	89.0	26.6	18.5	17.3
62.5°	297.0	71.7	20.8	15.0	13.9
65°	260.0	55.5	16.2	12.7	11.6
67.5°	226.5	40.4	12.7	10.4	9.2
70°	191.8	27.7	10.4	9.2	8.1
72.5°	158.3	17.3	8.1	6.9	6.9
75°	126.0	11.6	6.9	5.8	4.6
77.5°	95.9	6.9	4.6	4.6	3.5
80°	67.0	4.6	3.5	3.5	3.5
82.5°	41.6	3.5	2.3	2.3	2.3
85°	18.5	1.2	2.3	1.2	1.2
87.5°	3.5	1.2	1.2	1.2	1.2
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	18.27	19.59	18.63	19.90	20.22	4.57	5.89	4.94	6.21	6.52
	3H	20.74	21.91	21.12	22.24	22.60	5.42	6.59	5.80	6.92	7.29
	4H	21.69	22.79	22.10	23.14	23.52	5.69	6.79	6.10	7.14	7.52
	6H	22.38	23.38	22.80	23.75	24.15	5.89	6.89	6.31	7.26	7.66
	8H	22.58	23.53	23.01	23.92	24.32	5.97	6.92	6.40	7.31	7.71
	12H	22.66	23.57	23.09	23.95	24.38	5.99	6.90	6.42	7.28	7.71
4H	2H	18.05	19.15	18.46	19.50	19.88	5.15	6.24	5.55	6.59	6.97
	3H	20.54	21.43	20.95	21.83	22.24	6.18	7.07	6.59	7.47	7.88
	4H	21.48	22.28	21.91	22.70	23.14	6.54	7.34	6.98	7.76	8.21
	6H	22.23	22.92	22.70	23.37	23.84	6.84	7.53	7.30	7.98	8.44
	8H	22.48	23.12	22.95	23.57	24.04	6.94	7.58	7.41	8.03	8.50
	12H	22.61	23.18	23.09	23.66	24.13	6.99	7.56	7.47	8.04	8.51
8H	4H	21.35	21.99	21.82	22.44	22.91	6.92	7.56	7.38	8.01	8.48
	6H	22.09	22.61	22.59	23.11	23.59	7.28	7.81	7.78	8.30	8.78
	8H	22.33	22.80	22.85	23.32	23.81	7.42	7.89	7.94	8.41	8.90
	12H	22.48	22.89	23.00	23.39	23.96	7.51	7.92	8.02	8.42	8.99
12H	4H	21.30	21.87	21.79	22.35	22.83	7.04	7.61	7.52	8.09	8.56
	6H	22.02	22.50	22.55	23.01	23.50	7.40	7.87	7.92	8.39	8.88
	8H	22.29	22.70	22.80	23.20	23.77	7.58	7.99	8.09	8.49	9.06