

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: P1055405

Luminaire Tested: S122R3DR-H865D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055405
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-H865D935-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

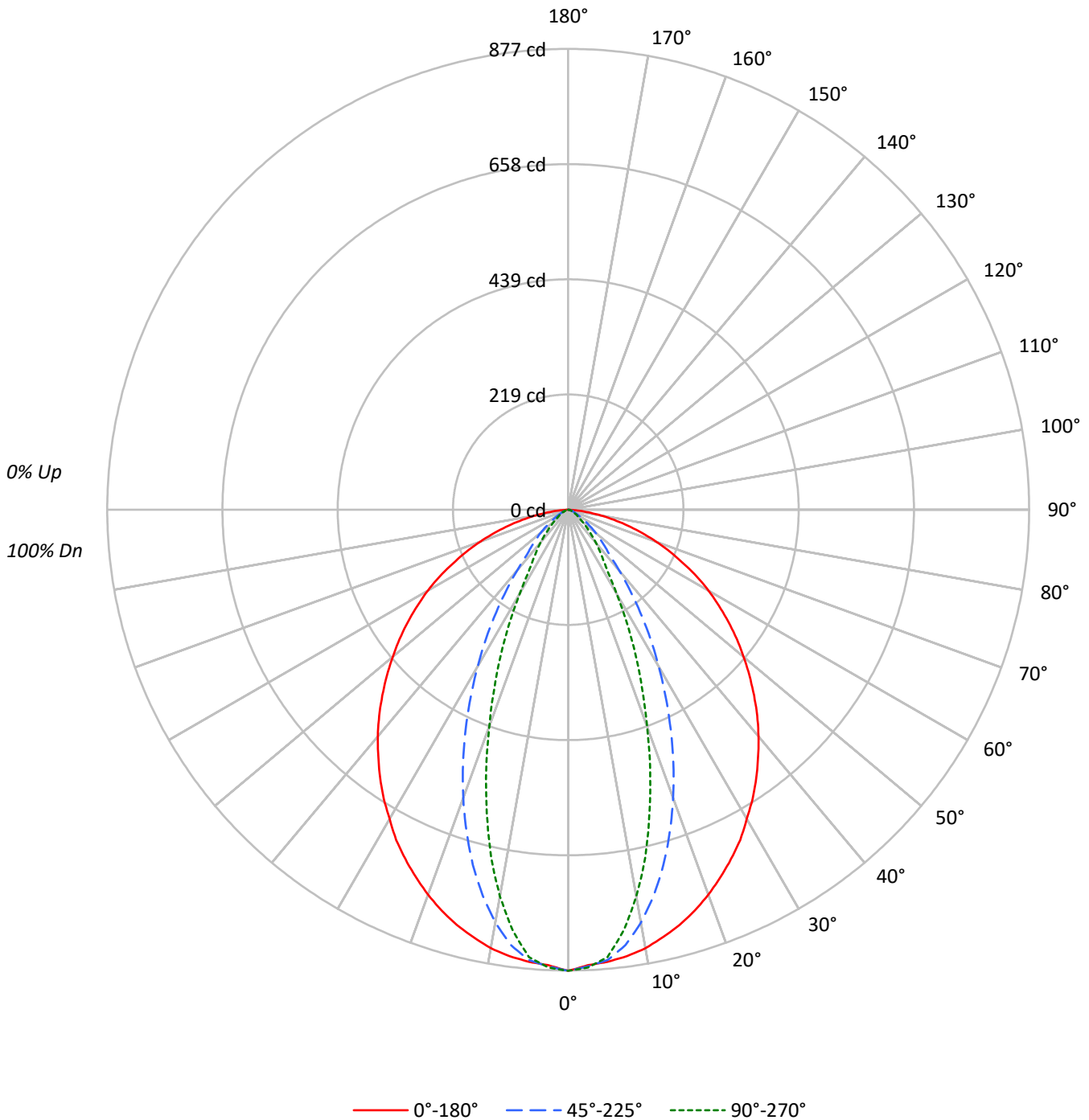
Lumens per Lamp: N/A
Luminaire Lumens: 1005.6 lumens
Efficiency: N/A
Efficacy: 32.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (A_{in}): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16623	16623	16623
5°	16420	16359	16257
10°	16300	15348	14377
15°	16050	13730	11725
20°	15718	11772	8845
25°	15329	9643	6315
30°	14867	7528	4023
35°	14423	5521	2685
40°	13934	3722	2021
45°	13397	2620	1441
50°	12836	1995	1014
55°	12288	1384	747
60°	11693	936	610
65°	10844	677	484
70°	9888	537	415
75°	8579	476	315
80°	6808	349	349
85°	3739	478	239

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13397 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	8.0
10°-20°	196.9	19.6
20°-30°	224.9	22.4
30°-40°	190.7	19.0
40°-50°	142.3	14.2
50°-60°	92.0	9.1
60°-70°	51.3	5.1
70°-80°	22.5	2.2
80°-90°	4.7	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°	502.0	49.9
0°-40°	692.8	68.9
0°-60°	927.1	92.2
0°-90°	1005.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1005.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	877	877	877	877	877	
5°	863	874	860	852	855	82
15°	818	798	700	626	598	230
25°	733	647	461	338	302	338
35°	624	470	239	130	116	390
45°	500	297	98	63	54	386
55°	372	141	42	26	23	333
65°	242	52	15	12	11	240
75°	117	11	6	5	4	125
85°	17	1	2	1	1	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	877.4	877.4	877.4	877.4	877.4
2.5°	867.7	880.6	869.9	869.9	872.0
5°	863.4	874.2	860.2	851.6	854.8
7.5°	857.0	864.5	835.5	809.7	807.5
10°	847.3	850.5	797.8	758.1	747.3
12.5°	833.3	825.8	751.6	695.7	677.4
15°	818.3	797.8	700.0	625.8	597.8
17.5°	800.0	763.4	643.0	552.7	518.3
20°	779.6	727.9	583.9	476.3	438.7
22.5°	757.0	688.2	522.6	404.3	366.7
25°	733.3	647.3	461.3	337.6	302.1
27.5°	708.6	604.3	401.1	277.4	238.7
30°	679.6	560.2	344.1	219.4	183.9
32.5°	652.7	514.0	291.4	169.9	139.8
35°	623.6	469.9	238.7	130.1	116.1
37.5°	593.5	425.8	192.5	109.7	97.8
40°	563.4	381.7	150.5	92.5	81.7
42.5°	532.3	338.7	116.1	77.4	66.7
45°	500.0	296.8	97.8	63.4	53.8
47.5°	467.7	254.8	81.7	50.5	43.0
50°	435.5	215.1	67.7	39.8	34.4
52.5°	404.3	177.4	53.8	32.3	28.0
55°	372.0	140.9	41.9	25.8	22.6
57.5°	339.8	109.7	32.3	21.5	19.4
60°	308.6	82.8	24.7	17.2	16.1
62.5°	276.3	66.7	19.4	14.0	12.9
65°	241.9	51.6	15.1	11.8	10.8
67.5°	210.7	37.6	11.8	9.7	8.6
70°	178.5	25.8	9.7	8.6	7.5
72.5°	147.3	16.1	7.5	6.5	6.5
75°	117.2	10.8	6.5	5.4	4.3
77.5°	89.2	6.5	4.3	4.3	3.2
80°	62.4	4.3	3.2	3.2	3.2
82.5°	38.7	3.2	2.2	2.2	2.2
85°	17.2	1.1	2.2	1.1	1.1
87.5°	3.2	1.1	1.1	1.1	1.1
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	18.02	19.34	18.38	19.65	19.97	4.33	5.65	4.69	5.96	6.28
	3H	20.49	21.66	20.87	21.99	22.35	5.18	6.35	5.56	6.68	7.04
	4H	21.44	22.53	21.85	22.89	23.27	5.45	6.55	5.86	6.90	7.28
	6H	22.13	23.13	22.55	23.50	23.90	5.64	6.65	6.06	7.02	7.41
	8H	22.33	23.28	22.76	23.67	24.07	5.72	6.67	6.15	7.06	7.47
	12H	22.41	23.32	22.84	23.70	24.13	5.75	6.66	6.18	7.04	7.47
4H	2H	17.80	18.90	18.21	19.25	19.63	4.90	6.00	5.31	6.35	6.73
	3H	20.29	21.18	20.70	21.58	21.99	5.94	6.83	6.35	7.23	7.64
	4H	21.23	22.03	21.66	22.45	22.89	6.31	7.11	6.74	7.53	7.97
	6H	21.98	22.68	22.45	23.12	23.59	6.59	7.28	7.06	7.73	8.20
	8H	22.23	22.87	22.70	23.32	23.79	6.70	7.34	7.17	7.79	8.26
	12H	22.36	22.93	22.84	23.41	23.88	6.75	7.31	7.23	7.80	8.27
8H	4H	21.10	21.74	21.57	22.19	22.66	6.68	7.32	7.15	7.77	8.24
	6H	21.84	22.36	22.34	22.86	23.34	7.03	7.56	7.54	8.05	8.54
	8H	22.08	22.55	22.60	23.07	23.56	7.18	7.65	7.70	8.16	8.66
	12H	22.23	22.64	22.75	23.14	23.71	7.27	7.68	7.78	8.18	8.75
12H	4H	21.05	21.62	21.54	22.10	22.58	6.80	7.37	7.29	7.85	8.33
	6H	21.78	22.25	22.30	22.76	23.25	7.15	7.62	7.68	8.14	8.63
	8H	22.04	22.45	22.55	22.95	23.52	7.34	7.75	7.85	8.25	8.82