

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



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: NEO-RAY

Report Number: P1055399

Luminaire Tested: S122R3DR-H865D927-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055399  
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-H865D927-X4F0-XX-UDD-FLL-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: -

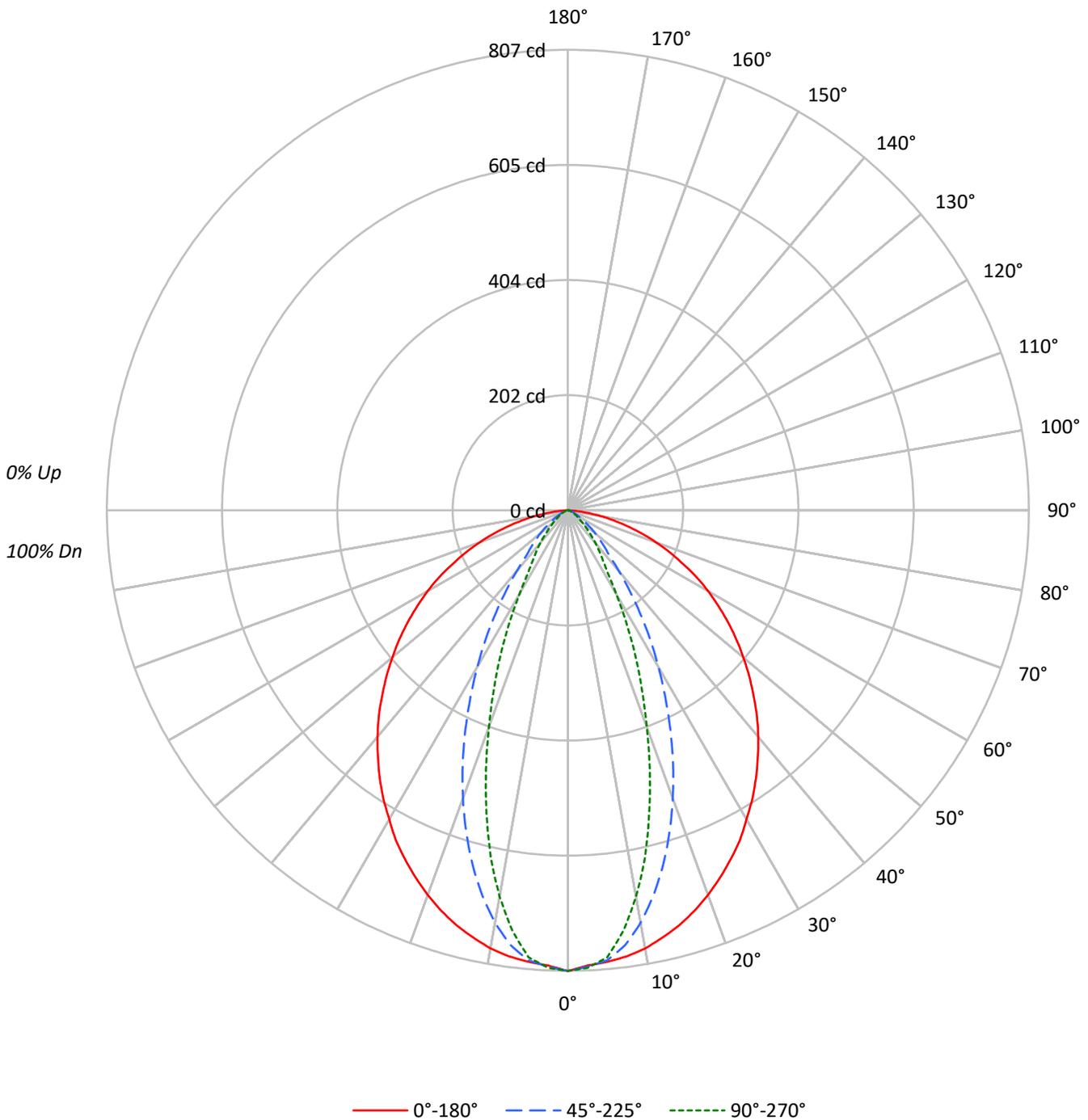
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 925.2 lumens  
Efficiency: N/A  
Efficacy: 29.9 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 (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	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°	15295	15295	15295
5°	15108	15051	14958
10°	14998	14123	13228
15°	14768	12632	10790
20°	14462	10831	8137
25°	14104	8872	5811
30°	13677	6926	3702
35°	13271	5079	2470
40°	12821	3425	1860
45°	12325	2411	1326
50°	11810	1836	934
55°	11307	1275	687
60°	10757	864	561
65°	9979	623	444
70°	9096	493	382
75°	7891	432	293
80°	6263	327	327
85°	3435	435	217

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12325 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.8	8.0
10°-20°	181.2	19.6
20°-30°	206.9	22.4
30°-40°	175.5	19.0
40°-50°	130.9	14.2
50°-60°	84.6	9.1
60°-70°	47.2	5.1
70°-80°	20.7	2.2
80°-90°	4.3	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°	461.9	49.9
0°-40°	637.4	68.9
0°-60°	853.0	92.2
0°-90°	925.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	925.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	807	807	807	807	807	
5°	794	804	791	784	786	75
15°	753	734	644	576	550	212
25°	675	596	424	311	278	311
35°	574	432	220	120	107	359
45°	460	273	90	58	50	355
55°	342	130	39	24	21	306
65°	223	48	14	11	10	221
75°	108	10	6	5	4	115
85°	16	1	2	1	1	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	807.3	807.3	807.3	807.3	807.3
2.5°	798.4	810.2	800.4	800.4	802.3
5°	794.4	804.3	791.4	783.5	786.5
7.5°	788.5	795.4	768.7	745.0	743.0
10°	779.6	782.5	734.1	697.5	687.6
12.5°	766.7	759.8	691.5	640.1	623.3
15°	752.9	734.1	644.0	575.8	550.1
17.5°	736.0	702.4	591.6	508.5	476.8
20°	717.3	669.8	537.2	438.3	403.6
22.5°	696.5	633.2	480.8	372.0	337.4
25°	674.7	595.6	424.4	310.6	278.0
27.5°	652.0	556.0	369.0	255.2	219.6
30°	625.2	515.4	316.6	201.8	169.2
32.5°	600.5	472.9	268.1	156.3	128.6
35°	573.8	432.3	219.6	119.7	106.8
37.5°	546.1	391.8	177.1	100.9	90.0
40°	518.4	351.2	138.5	85.1	75.2
42.5°	489.7	311.6	106.8	71.2	61.3
45°	460.0	273.0	90.0	58.4	49.5
47.5°	430.4	234.5	75.2	46.5	39.6
50°	400.7	197.9	62.3	36.6	31.7
52.5°	372.0	163.2	49.5	29.7	25.7
55°	342.3	129.6	38.6	23.7	20.8
57.5°	312.6	100.9	29.7	19.8	17.8
60°	283.9	76.2	22.8	15.8	14.8
62.5°	254.3	61.3	17.8	12.9	11.9
65°	222.6	47.5	13.9	10.9	9.9
67.5°	193.9	34.6	10.9	8.9	7.9
70°	164.2	23.7	8.9	7.9	6.9
72.5°	135.5	14.8	6.9	5.9	5.9
75°	107.8	9.9	5.9	4.9	4.0
77.5°	82.1	5.9	4.0	4.0	3.0
80°	57.4	4.0	3.0	3.0	3.0
82.5°	35.6	3.0	2.0	2.0	2.0
85°	15.8	1.0	2.0	1.0	1.0
87.5°	3.0	1.0	1.0	1.0	1.0
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	17.73	19.05	18.09	19.36	19.67	4.04	5.36	4.41	5.67	5.99
	3H	20.20	21.37	20.58	21.70	22.06	4.89	6.06	5.27	6.39	6.75
	4H	21.15	22.24	21.55	22.59	22.98	5.16	6.25	5.56	6.60	6.99
	6H	21.84	22.84	22.25	23.21	23.61	5.36	6.36	5.77	6.73	7.13
	8H	22.03	22.99	22.47	23.38	23.78	5.44	6.39	5.87	6.78	7.18
	12H	22.12	23.03	22.55	23.41	23.84	5.46	6.37	5.89	6.75	7.18
4H	2H	17.51	18.60	17.91	18.96	19.34	4.62	5.71	5.02	6.06	6.44
	3H	20.00	20.89	20.41	21.29	21.70	5.64	6.54	6.05	6.94	7.34
	4H	20.94	21.74	21.37	22.16	22.60	6.01	6.81	6.44	7.23	7.67
	6H	21.69	22.38	22.16	22.83	23.30	6.31	7.00	6.77	7.44	7.91
	8H	21.94	22.58	22.41	23.03	23.50	6.41	7.05	6.88	7.50	7.97
	12H	22.07	22.63	22.55	23.12	23.59	6.46	7.02	6.94	7.51	7.98
8H	4H	20.81	21.45	21.28	21.90	22.37	6.38	7.02	6.85	7.47	7.94
	6H	21.55	22.07	22.05	22.57	23.05	6.75	7.27	7.25	7.77	8.25
	8H	21.79	22.26	22.31	22.78	23.27	6.89	7.36	7.41	7.88	8.37
	12H	21.94	22.35	22.46	22.85	23.42	6.98	7.39	7.49	7.89	8.46
12H	4H	20.76	21.33	21.25	21.81	22.29	6.50	7.07	6.99	7.55	8.03
	6H	21.48	21.96	22.01	22.47	22.96	6.87	7.34	7.39	7.85	8.35
	8H	21.75	22.16	22.26	22.66	23.23	7.05	7.47	7.57	7.96	8.53