

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: P1055302

Luminaire Tested: S122R3DR-H1005D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055302  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H1005D950-X4F0-XX-UDD-FLL-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

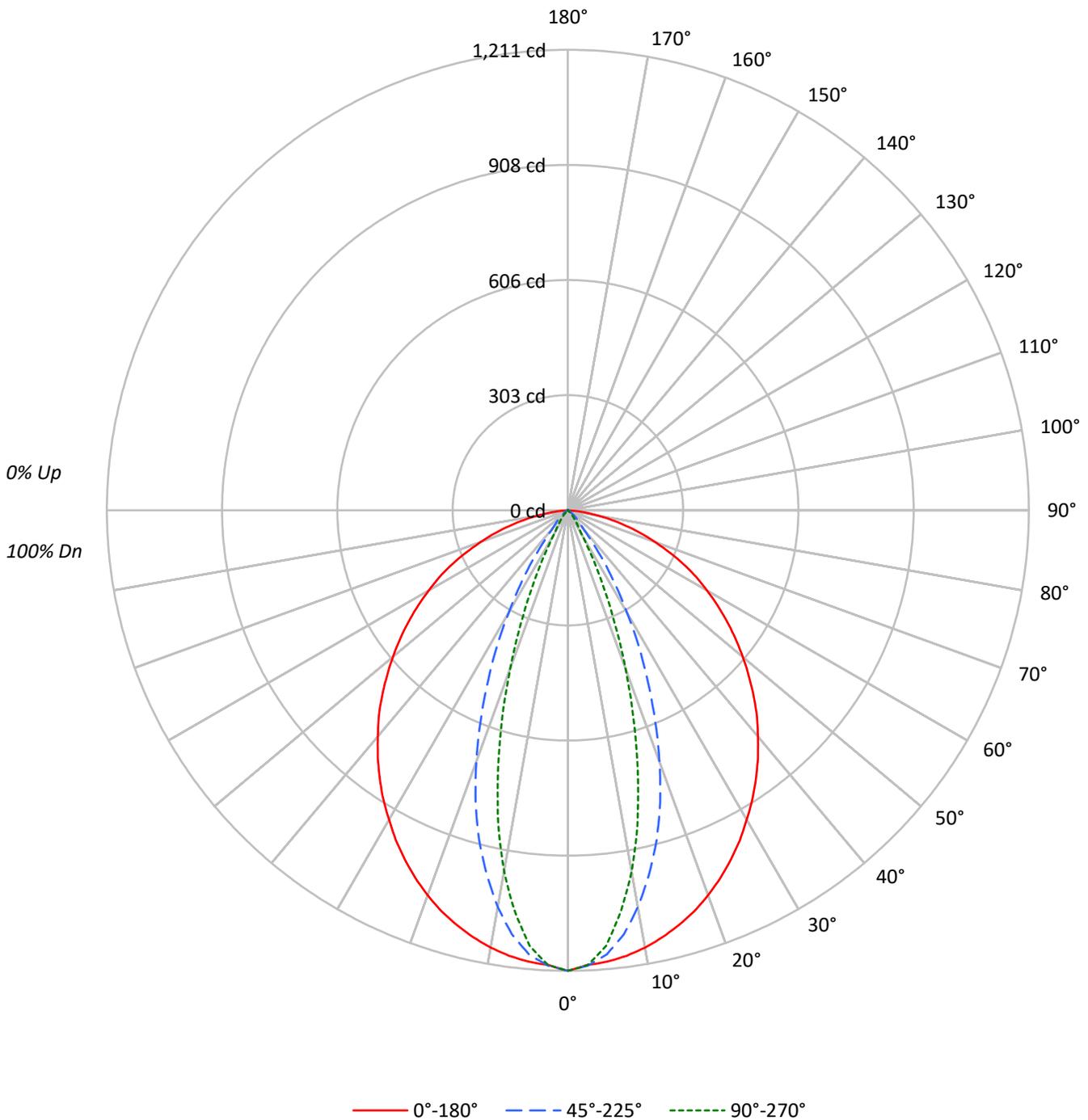
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1101.6 lumens  
Efficiency: N/A  
Efficacy: 30.1 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7  
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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	22942	22942	22942
5°	22658	22287	21863
10°	22464	20375	18555
15°	22139	17635	13895
20°	21718	14172	8895
25°	21180	10387	4568
30°	20553	6791	1492
35°	19925	3765	870
40°	19207	1514	482
45°	18496	1007	188
50°	17682	575	83
55°	16872	277	46
60°	15979	106	0
65°	15036	63	0
70°	13494	78	0
75°	11617	102	0
80°	8805	0	0
85°	3630	304	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18496 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.6	9.9
10°-20°	252.2	22.9
20°-30°	256.1	23.2
30°-40°	192.1	17.4
40°-50°	134.5	12.2
50°-60°	82.4	7.5
60°-70°	49.1	4.5
70°-80°	22.6	2.1
80°-90°	4.1	0.4
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°	616.8	56.0
0°-40°	809.0	73.4
0°-60°	1025.9	93.1
0°-90°	1101.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1101.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1211	1211	1211	1211	1211	
5°	1191	1202	1172	1150	1150	113
15°	1129	1068	899	761	708	318
25°	1013	835	497	284	218	466
35°	862	561	163	49	38	538
45°	690	296	38	11	7	532
55°	511	90	8	3	1	457
65°	335	26	1	1	0	330
75°	159	3	1	1	0	169
85°	17	0	1	1	0	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1196.9	1215.0	1198.3	1195.5	1196.9
5°	1191.4	1202.5	1171.9	1149.6	1149.6
7.5°	1181.6	1181.6	1124.6	1078.6	1064.7
10°	1167.7	1152.4	1059.1	985.4	964.5
12.5°	1149.6	1113.4	982.6	878.2	844.8
15°	1128.7	1067.5	899.1	761.3	708.4
17.5°	1105.1	1016.0	805.8	634.7	573.4
20°	1077.2	960.3	702.9	505.2	441.2
22.5°	1046.6	899.1	598.5	389.7	321.5
25°	1013.2	835.1	496.9	283.9	218.5
27.5°	978.4	768.3	403.6	194.8	133.6
30°	939.5	698.7	310.4	115.5	68.2
32.5°	901.9	631.9	232.4	62.6	50.1
35°	861.5	560.9	162.8	48.7	37.6
37.5°	819.8	494.1	100.2	36.2	27.8
40°	776.6	425.9	61.2	26.4	19.5
42.5°	734.9	361.9	48.7	18.1	12.5
45°	690.3	296.4	37.6	11.1	7.0
47.5°	644.4	236.6	27.8	7.0	4.2
50°	599.9	183.7	19.5	4.2	2.8
52.5°	555.3	135.0	12.5	2.8	1.4
55°	510.8	90.5	8.4	2.8	1.4
57.5°	466.2	64.0	5.6	1.4	1.4
60°	421.7	50.1	2.8	1.4	0.0
62.5°	380.0	39.0	2.8	1.4	1.4
65°	335.4	26.4	1.4	1.4	0.0
67.5°	288.1	16.7	1.4	1.4	0.0
70°	243.6	9.7	1.4	1.4	0.0
72.5°	200.4	5.6	1.4	1.4	0.0
75°	158.7	2.8	1.4	1.4	0.0
77.5°	118.3	1.4	0.0	1.4	0.0
80°	80.7	0.0	0.0	1.4	0.0
82.5°	47.3	0.0	0.0	1.4	0.0
85°	16.7	0.0	1.4	1.4	0.0
87.5°	0.0	0.0	1.4	1.4	0.0
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	17.09	18.35	17.46	18.67	18.98	0.00	0.00	0.00	0.00	0.00
	3H	20.84	21.95	21.22	22.29	22.65	0.00	0.00	0.00	0.00	0.00
	4H	22.15	23.19	22.55	23.54	23.92	0.00	0.00	0.00	0.00	0.00
	6H	23.00	23.96	23.42	24.33	24.72	0.00	0.00	0.00	0.00	0.00
	8H	23.22	24.12	23.65	24.51	24.92	0.00	0.00	0.00	0.00	0.00
	12H	23.28	24.14	23.71	24.53	24.96	0.00	0.00	0.00	0.00	0.00
4H	2H	16.85	17.89	17.25	18.24	18.63	0.00	0.00	0.00	0.00	0.00
	3H	20.59	21.44	21.00	21.85	22.25	0.00	0.00	0.00	0.00	0.00
	4H	21.89	22.65	22.32	23.07	23.51	0.00	0.00	0.00	0.00	0.00
	6H	22.81	23.46	23.27	23.91	24.38	0.00	0.00	0.00	0.00	0.00
	8H	23.06	23.68	23.53	24.12	24.60	0.00	0.00	0.00	0.00	0.00
	12H	23.17	23.70	23.65	24.19	24.66	0.00	0.00	0.00	0.00	0.00
8H	4H	21.74	22.35	22.21	22.80	23.27	0.00	0.00	0.00	0.00	0.00
	6H	22.64	23.14	23.15	23.64	24.12	0.00	0.00	0.00	0.00	0.00
	8H	22.90	23.34	23.42	23.86	24.35	0.00	0.00	0.00	0.00	0.00
	12H	23.02	23.41	23.53	23.90	24.48	0.00	0.00	0.00	0.00	0.00
12H	4H	21.69	22.23	22.18	22.72	23.19	0.00	0.00	0.00	0.00	0.00
	6H	22.58	23.02	23.10	23.54	24.03	0.00	0.00	0.00	0.00	0.00
	8H	22.86	23.25	23.37	23.74	24.31	0.00	0.00	0.00	0.00	0.00