

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: P1055223

Luminaire Tested: S122R3DR-S485D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055223  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S485D950-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

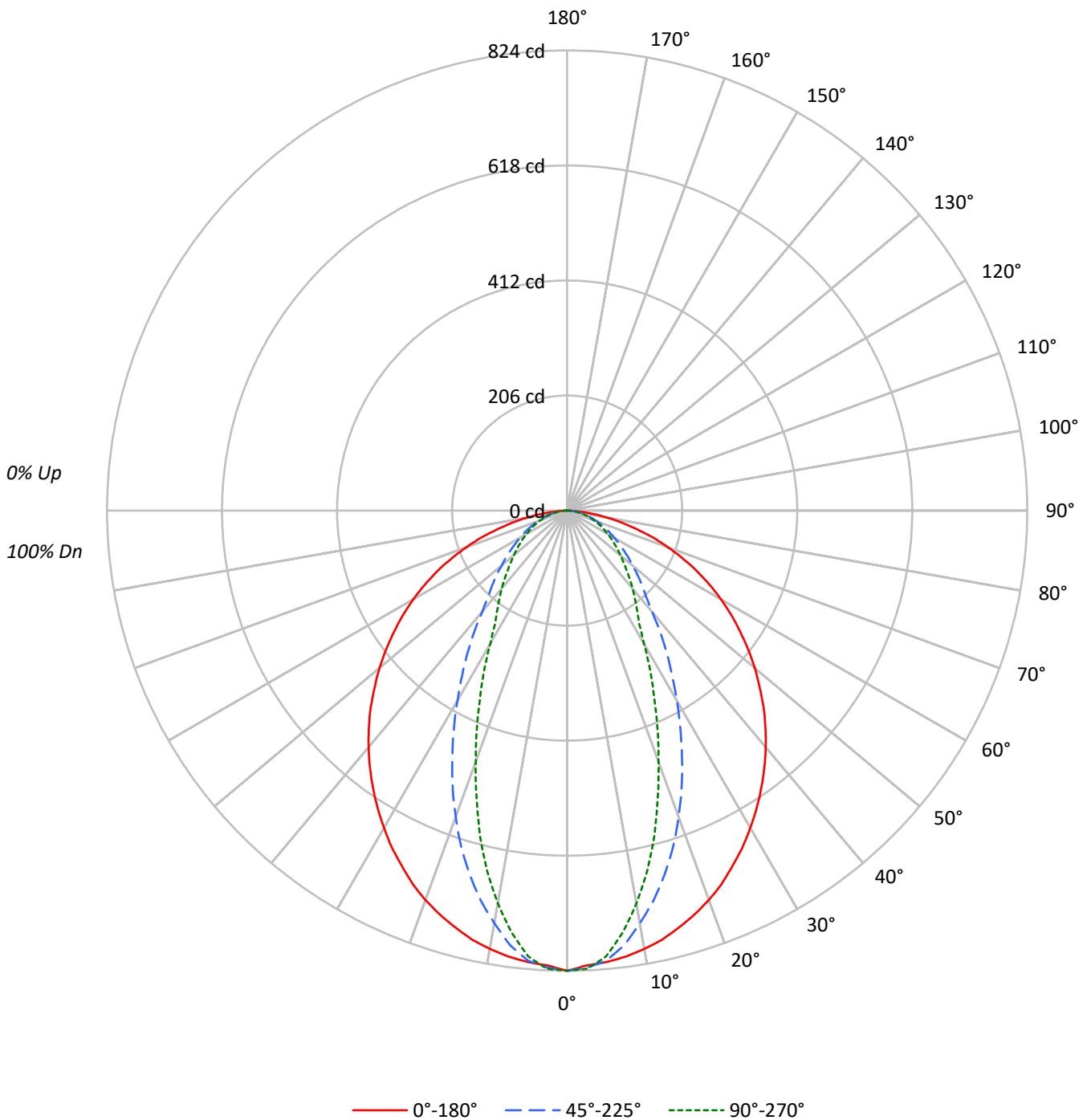
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1246.3 lumens  
Efficiency: N/A  
Efficacy: 65.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.1  
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89					87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34					32				

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

	0°	45°	90°
0°	15611	15611	15611
5°	15435	15382	15237
10°	15335	14432	13744
15°	15162	13230	11823
20°	14960	11764	9653
25°	14660	10168	7705
30°	14349	8591	6014
35°	14023	7186	5051
40°	13682	5827	4499
45°	13327	5093	4024
50°	12933	4507	3675
55°	12492	4073	3412
60°	12061	3706	3183
65°	11490	3398	2995
70°	10647	3169	2825
75°	9428	2877	2672
80°	8041	2706	2477
85°	5543	2391	2239

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13327 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.5	6.1
10°-20°	190.6	15.3
20°-30°	234.9	18.8
30°-40°	225.4	18.1
40°-50°	194.4	15.6
50°-60°	150.8	12.1
60°-70°	103.3	8.3
70°-80°	56.1	4.5
80°-90°	15.4	1.2
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°	501.0	40.2
0°-40°	726.4	58.3
0°-60°	1071.6	86.0
0°-90°	1246.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1246.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	812	823	809	798	801	77
15°	773	750	674	619	603	218
25°	701	626	486	397	369	323
35°	606	481	311	232	218	379
45°	497	335	190	157	150	383
55°	378	201	123	107	103	339
65°	256	110	76	69	67	253
75°	129	50	39	37	36	138
85°	26	12	11	11	10	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	824.0	824.0	824.0	824.0	824.0
2.5°	815.0	828.8	819.1	819.1	821.2
5°	811.6	823.3	808.8	798.5	801.2
7.5°	805.4	813.6	784.7	762.6	762.0
10°	797.1	797.8	750.2	721.3	714.4
12.5°	786.8	775.7	715.1	671.7	661.4
15°	773.0	749.5	674.5	619.3	602.8
17.5°	758.5	722.7	631.1	562.2	539.4
20°	742.0	690.3	583.5	505.0	478.8
22.5°	723.4	659.3	536.0	449.9	422.3
25°	701.3	626.2	486.4	396.8	368.6
27.5°	680.0	592.5	438.8	350.0	321.0
30°	655.9	556.0	392.7	305.2	274.9
32.5°	631.7	518.8	350.0	262.5	239.7
35°	606.3	480.9	310.7	231.5	218.4
37.5°	580.1	443.7	273.5	210.8	199.1
40°	553.2	406.5	235.6	190.8	181.9
42.5°	525.6	370.0	209.4	174.3	166.0
45°	497.4	334.8	190.1	157.1	150.2
47.5°	467.1	299.7	171.5	142.6	136.4
50°	438.8	265.9	152.9	129.5	124.7
52.5°	408.5	232.9	137.8	117.8	113.7
55°	378.2	201.2	123.3	106.8	103.3
57.5°	348.6	170.9	109.5	96.4	93.7
60°	318.3	146.7	97.8	86.8	84.0
62.5°	287.3	127.5	86.8	77.8	75.1
65°	256.3	109.5	75.8	68.9	66.8
67.5°	223.9	92.3	66.1	60.6	59.2
70°	192.2	77.2	57.2	52.4	51.0
72.5°	161.2	62.7	48.2	44.8	43.4
75°	128.8	50.3	39.3	37.2	36.5
77.5°	100.6	39.3	31.7	30.3	29.6
80°	73.7	28.9	24.8	23.4	22.7
82.5°	48.9	20.0	17.9	17.2	16.5
85°	25.5	12.4	11.0	11.0	10.3
87.5°	8.3	5.5	5.5	5.5	4.8
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	19.16	20.63	19.52	20.94	21.25	13.96	15.43	14.32	15.74	16.06
	3H	21.49	22.80	21.86	23.13	23.49	15.61	16.92	15.99	17.25	17.61
	4H	22.38	23.62	22.78	23.97	24.35	16.24	17.48	16.64	17.83	18.21
	6H	23.04	24.18	23.46	24.55	24.94	16.74	17.88	17.15	18.24	18.64
	8H	23.25	24.34	23.68	24.73	25.13	16.91	17.99	17.33	18.38	18.78
	12H	23.37	24.41	23.80	24.79	25.22	17.02	18.06	17.45	18.44	18.87
4H	2H	19.17	20.41	19.57	20.76	21.14	14.68	15.91	15.08	16.26	16.64
	3H	21.59	22.61	22.00	23.01	23.41	16.52	17.55	16.94	17.95	18.35
	4H	22.51	23.44	22.95	23.85	24.29	17.27	18.19	17.70	18.61	19.05
	6H	23.29	24.09	23.75	24.54	25.00	17.89	18.69	18.34	19.13	19.59
	8H	23.56	24.31	24.03	24.76	25.23	18.10	18.85	18.57	19.30	19.76
	12H	23.74	24.41	24.22	24.89	25.36	18.26	18.93	18.74	19.41	19.88
8H	4H	22.51	23.26	22.97	23.70	24.17	17.65	18.40	18.12	18.84	19.31
	6H	23.32	23.93	23.81	24.43	24.90	18.39	19.01	18.89	19.50	19.98
	8H	23.62	24.17	24.13	24.68	25.17	18.68	19.24	19.20	19.75	20.24
	12H	23.85	24.34	24.36	24.83	25.40	18.93	19.41	19.44	19.91	20.47
12H	4H	22.49	23.16	22.97	23.64	24.11	17.71	18.38	18.19	18.86	19.33
	6H	23.29	23.85	23.81	24.36	24.85	18.47	19.03	18.99	19.54	20.03
	8H	23.63	24.11	24.14	24.61	25.17	18.83	19.32	19.34	19.81	20.38