

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: P1055351

Luminaire Tested: S122R3DR-H485D935-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055351  
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-H485D935-X4F0-XX-UDD-FLL-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: -

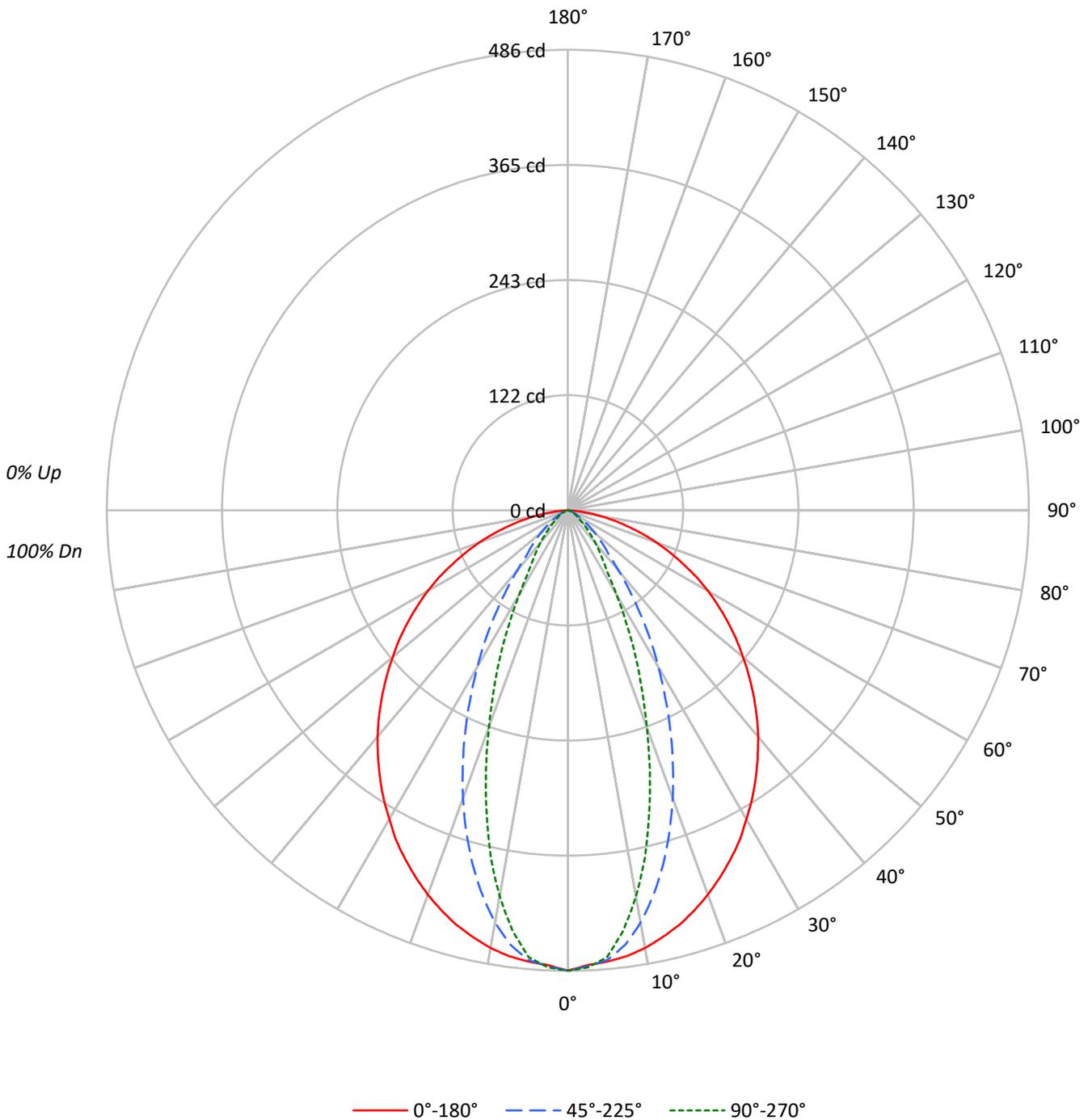
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 556.8 lumens  
Efficiency: N/A  
Efficacy: 32.2 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): 17.3  
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	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°	9204	9204	9204
5°	9093	9058	9001
10°	9025	8497	7961
15°	8887	7602	6492
20°	8702	6518	4897
25°	8487	5339	3497
30°	8232	4168	2227
35°	7986	3058	1487
40°	7716	2060	1118
45°	7416	1452	798
50°	7106	1105	563
55°	6804	766	413
60°	6476	519	337
65°	6007	372	269
70°	5473	299	233
75°	4751	264	176
80°	3764	196	196
85°	2065	261	130

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7416 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.4	8.0
10°-20°	109.0	19.6
20°-30°	124.5	22.4
30°-40°	105.6	19.0
40°-50°	78.8	14.2
50°-60°	50.9	9.1
60°-70°	28.4	5.1
70°-80°	12.5	2.2
80°-90°	2.6	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°	278.0	49.9
0°-40°	383.6	68.9
0°-60°	513.3	92.2
0°-90°	556.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	556.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	478	484	476	472	473	45
15°	453	442	388	346	331	128
25°	406	358	255	187	167	187
35°	345	260	132	72	64	216
45°	277	164	54	35	30	214
55°	206	78	23	14	12	184
65°	134	29	8	6	6	133
75°	65	6	4	3	2	69
85°	10	1	1	1	1	14
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	485.8	485.8	485.8	485.8	485.8
2.5°	480.4	487.6	481.6	481.6	482.8
5°	478.1	484.0	476.3	471.5	473.3
7.5°	474.5	478.7	462.6	448.3	447.1
10°	469.1	470.9	441.7	419.7	413.8
12.5°	461.4	457.2	416.1	385.2	375.1
15°	453.1	441.7	387.6	346.5	331.0
17.5°	442.9	422.7	356.0	306.0	287.0
20°	431.6	403.0	323.3	263.7	242.9
22.5°	419.1	381.0	289.3	223.8	203.0
25°	406.0	358.4	255.4	186.9	167.3
27.5°	392.3	334.6	222.1	153.6	132.2
30°	376.3	310.2	190.5	121.4	101.8
32.5°	361.4	284.6	161.3	94.1	77.4
35°	345.3	260.2	132.2	72.0	64.3
37.5°	328.6	235.8	106.6	60.7	54.2
40°	312.0	211.3	83.3	51.2	45.2
42.5°	294.7	187.5	64.3	42.9	36.9
45°	276.8	164.3	54.2	35.1	29.8
47.5°	259.0	141.1	45.2	28.0	23.8
50°	241.1	119.1	37.5	22.0	19.1
52.5°	223.8	98.2	29.8	17.9	15.5
55°	206.0	78.0	23.2	14.3	12.5
57.5°	188.1	60.7	17.9	11.9	10.7
60°	170.9	45.8	13.7	9.5	8.9
62.5°	153.0	36.9	10.7	7.7	7.1
65°	134.0	28.6	8.3	6.5	6.0
67.5°	116.7	20.8	6.5	5.4	4.8
70°	98.8	14.3	5.4	4.8	4.2
72.5°	81.6	8.9	4.2	3.6	3.6
75°	64.9	6.0	3.6	3.0	2.4
77.5°	49.4	3.6	2.4	2.4	1.8
80°	34.5	2.4	1.8	1.8	1.8
82.5°	21.4	1.8	1.2	1.2	1.2
85°	9.5	0.6	1.2	0.6	0.6
87.5°	1.8	0.6	0.6	0.6	0.6
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	15.96	17.28	16.33	17.59	17.91	2.27	3.59	2.63	3.90	4.21
	3H	18.43	19.60	18.81	19.93	20.30	3.13	4.30	3.51	4.63	5.00
	4H	19.39	20.48	19.79	20.83	21.21	3.41	4.50	3.81	4.85	5.24
	6H	20.08	21.08	20.49	21.45	21.84	3.61	4.61	4.02	4.98	5.37
	8H	20.27	21.22	20.70	21.61	22.02	3.68	4.63	4.11	5.02	5.43
	12H	20.35	21.26	20.78	21.64	22.07	3.71	4.62	4.14	5.00	5.43
4H	2H	15.75	16.84	16.15	17.19	17.57	2.84	3.93	3.24	4.28	4.66
	3H	18.23	19.13	18.64	19.53	19.93	3.89	4.78	4.30	5.18	5.59
	4H	19.18	19.98	19.61	20.39	20.84	4.26	5.06	4.69	5.48	5.92
	6H	19.93	20.62	20.39	21.07	21.53	4.56	5.25	5.02	5.69	6.16
	8H	20.17	20.82	20.64	21.26	21.74	4.66	5.30	5.12	5.75	6.22
	12H	20.30	20.87	20.79	21.35	21.83	4.70	5.27	5.19	5.75	6.23
8H	4H	19.04	19.69	19.51	20.13	20.61	4.63	5.28	5.10	5.72	6.20
	6H	19.78	20.31	20.28	20.80	21.28	5.00	5.52	5.50	6.02	6.50
	8H	20.03	20.50	20.55	21.01	21.50	5.14	5.61	5.66	6.13	6.62
	12H	20.18	20.59	20.69	21.08	21.66	5.22	5.64	5.74	6.13	6.70
12H	4H	19.00	19.57	19.48	20.05	20.52	4.76	5.32	5.24	5.81	6.28
	6H	19.72	20.19	20.24	20.71	21.20	5.12	5.59	5.64	6.10	6.60
	8H	19.98	20.40	20.50	20.89	21.46	5.30	5.71	5.81	6.21	6.78