

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: P1055219

Luminaire Tested: S122R3DR-S485D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055219  
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-S485D940-X4F0-XX-UDD-F-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

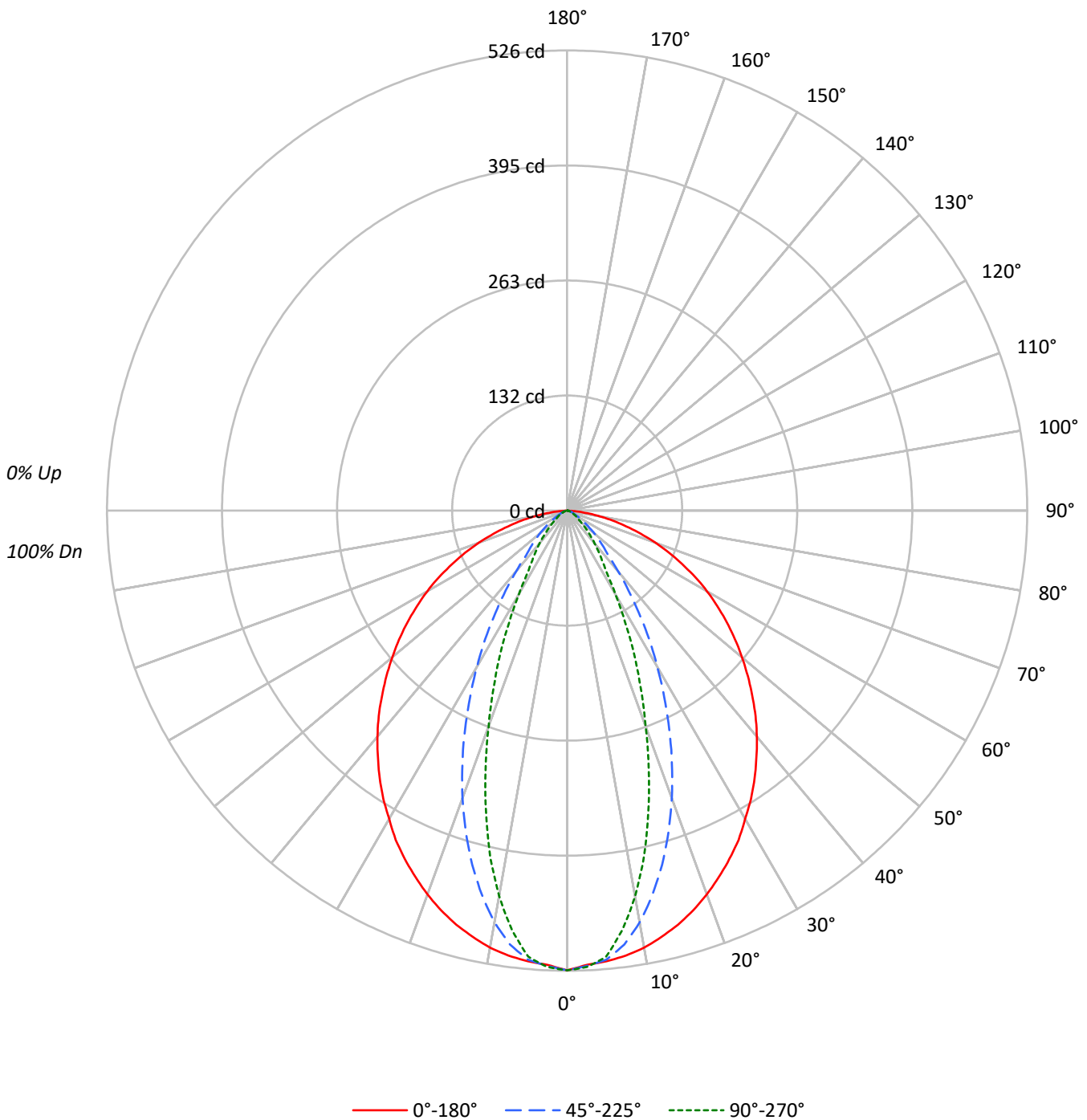
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 602.2 lumens  
Efficiency: N/A  
Efficacy: 31.5 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): 19.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	9956	9956	9956
5°	9834	9798	9735
10°	9761	9192	8609
15°	9611	8222	7022
20°	9414	7051	5296
25°	9181	5776	3782
30°	8904	4509	2409
35°	8639	3307	1607
40°	8345	2231	1209
45°	8022	1570	863
50°	7687	1197	607
55°	7359	829	446
60°	7002	561	368
65°	6496	403	287
70°	5922	321	249
75°	5139	285	190
80°	4070	207	207
85°	2239	283	130

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8022 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.0	8.0
10°-20°	117.9	19.6
20°-30°	134.7	22.4
30°-40°	114.2	19.0
40°-50°	85.2	14.2
50°-60°	55.1	9.1
60°-70°	30.7	5.1
70°-80°	13.5	2.2
80°-90°	2.8	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°	300.7	49.9
0°-40°	414.9	68.9
0°-60°	555.2	92.2
0°-90°	602.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	602.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	526	526	526	526	526	
5°	517	524	515	510	512	49
15°	490	478	419	375	358	138
25°	439	388	276	202	181	202
35°	374	281	143	78	70	233
45°	299	178	59	38	32	231
55°	223	84	25	16	14	199
65°	145	31	9	7	6	144
75°	70	6	4	3	3	75
85°	10	1	1	1	1	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	525.5	525.5	525.5	525.5	525.5
2.5°	519.7	527.4	520.9	520.9	522.2
5°	517.1	523.5	515.2	510.0	511.9
7.5°	513.2	517.7	500.3	484.9	483.6
10°	507.4	509.4	477.8	454.0	447.5
12.5°	499.1	494.5	450.1	416.6	405.7
15°	490.0	477.8	419.2	374.8	358.0
17.5°	479.1	457.2	385.1	331.0	310.4
20°	466.9	435.9	349.7	285.3	262.7
22.5°	453.3	412.1	313.0	242.1	219.6
25°	439.2	387.7	276.3	202.2	180.9
27.5°	424.4	361.9	240.2	166.1	143.0
30°	407.0	335.5	206.1	131.4	110.1
32.5°	390.9	307.8	174.5	101.7	83.7
35°	373.5	281.4	143.0	77.9	69.5
37.5°	355.5	255.0	115.3	65.7	58.6
40°	337.4	228.6	90.2	55.4	48.9
42.5°	318.8	202.8	69.5	46.4	39.9
45°	299.4	177.7	58.6	38.0	32.2
47.5°	280.1	152.6	48.9	30.3	25.8
50°	260.8	128.8	40.6	23.8	20.6
52.5°	242.1	106.3	32.2	19.3	16.7
55°	222.8	84.4	25.1	15.5	13.5
57.5°	203.5	65.7	19.3	12.9	11.6
60°	184.8	49.6	14.8	10.3	9.7
62.5°	165.5	39.9	11.6	8.4	7.7
65°	144.9	30.9	9.0	7.1	6.4
67.5°	126.2	22.5	7.1	5.8	5.2
70°	106.9	15.5	5.8	5.2	4.5
72.5°	88.2	9.7	4.5	3.9	3.9
75°	70.2	6.4	3.9	3.2	2.6
77.5°	53.4	3.9	2.6	2.6	1.9
80°	37.3	2.6	1.9	1.9	1.9
82.5°	23.2	1.9	1.3	1.3	1.3
85°	10.3	0.6	1.3	0.6	0.6
87.5°	1.9	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	16.24	17.56	16.60	17.87	18.18	2.56	3.88	2.92	4.19	4.50
	3H	18.71	19.88	19.09	20.21	20.57	3.41	4.58	3.79	4.91	5.28
	4H	19.66	20.75	20.06	21.10	21.49	3.69	4.78	4.09	5.13	5.51
	6H	20.35	21.35	20.76	21.72	22.12	3.87	4.88	4.29	5.25	5.64
	8H	20.54	21.49	20.97	21.88	22.29	3.95	4.90	4.38	5.29	5.69
	12H	20.63	21.53	21.06	21.92	22.35	3.97	4.88	4.40	5.26	5.69
4H	2H	16.02	17.11	16.42	17.46	17.85	3.12	4.22	3.53	4.57	4.95
	3H	18.51	19.40	18.92	19.80	20.21	4.16	5.06	4.58	5.46	5.87
	4H	19.45	20.25	19.88	20.67	21.11	4.53	5.33	4.97	5.75	6.19
	6H	20.20	20.89	20.67	21.34	21.81	4.82	5.51	5.28	5.95	6.42
	8H	20.45	21.09	20.91	21.54	22.01	4.91	5.56	5.38	6.01	6.48
	12H	20.57	21.14	21.06	21.63	22.10	4.95	5.52	5.44	6.01	6.48
8H	4H	19.32	19.96	19.79	20.41	20.88	4.90	5.55	5.37	6.00	6.47
	6H	20.05	20.58	20.56	21.08	21.56	5.25	5.78	5.76	6.28	6.76
	8H	20.30	20.77	20.82	21.28	21.78	5.39	5.86	5.92	6.38	6.87
	12H	20.45	20.86	20.96	21.36	21.93	5.47	5.88	5.99	6.38	6.95
12H	4H	19.27	19.84	19.76	20.32	20.80	5.03	5.59	5.51	6.08	6.55
	6H	19.99	20.46	20.52	20.98	21.47	5.37	5.85	5.90	6.36	6.85
	8H	20.26	20.67	20.77	21.17	21.74	5.55	5.97	6.07	6.46	7.03