

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: P1058537

Luminaire Tested: S122RDR-H865D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058537  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-60)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D840-X4F0-XX-UDD-BVL-S  
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

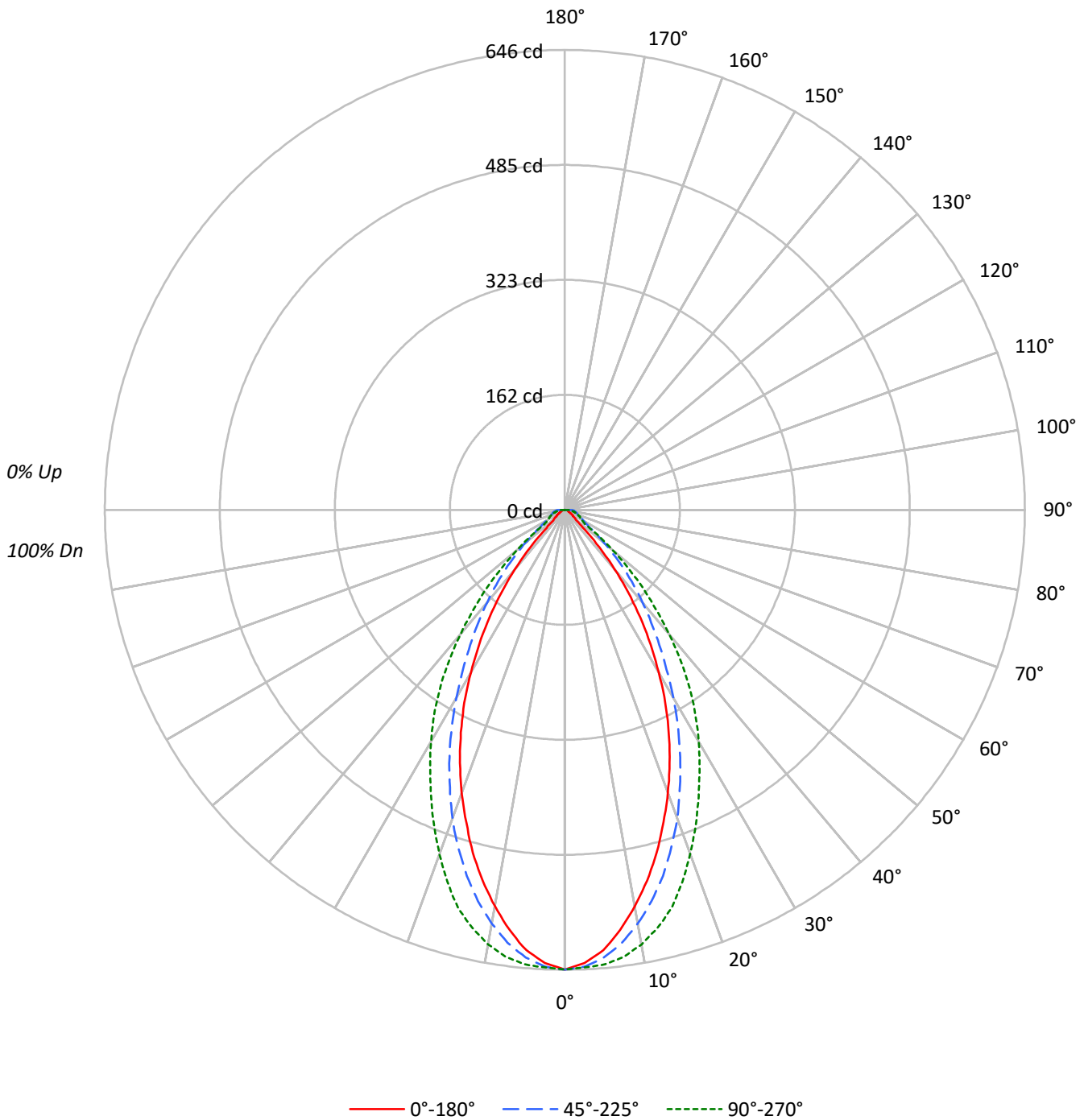
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 696.1 lumens  
Efficiency: N/A  
Efficacy: 22.3 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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				
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81				
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	67	63	61				
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57				
7	77	67	60	55	76	66	59	55	65	59	54	63	58	54	62	57	54	52				
8	73	62	55	51	72	62	55	51	61	55	50	59	54	50	58	54	50	48				
9	69	58	52	47	68	58	51	47	57	51	47	56	51	47	55	50	47	45				
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44	42				

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

	0°	45°	90°
0°	11917	11917	11917
5°	11505	11688	11871
10°	10594	11057	11613
15°	9525	10163	11061
20°	8308	9062	10107
25°	7028	7808	9044
30°	5614	6486	8014
35°	4152	5213	6884
40°	2623	4083	5482
45°	1033	3066	4037
50°	534	2061	2486
55°	438	1354	1113
60°	321	1096	1004
65°	271	1026	1026
70°	264	1068	1003
75°	349	1233	1055
80°	521	1573	1180
85°	783	2625	1567

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 87.5°  
 Luminance: 5246 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.1	8.5
10°-20°	149.2	21.4
20°-30°	177.3	25.5
30°-40°	147.5	21.2
40°-50°	82.4	11.8
50°-60°	33.3	4.8
60°-70°	21.3	3.1
70°-80°	16.0	2.3
80°-90°	10.2	1.5
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°	385.6	55.4
0°-40°	533.1	76.6
0°-60°	648.7	93.2
0°-90°	696.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	696.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	646	646	646	646	646	
5°	621	632	631	636	641	57
15°	499	513	532	559	579	139
25°	345	359	384	413	444	157
35°	184	202	231	270	306	114
45°	40	67	118	137	155	37
55°	14	28	42	41	35	12
65°	6	25	24	22	24	6
75°	5	17	17	16	15	5
85°	4	11	12	11	7	4
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	645.8	645.8	645.8	645.8	645.8
2.5°	637.2	647.1	642.1	642.1	643.3
5°	621.1	632.2	631.0	635.9	640.9
7.5°	595.1	607.5	613.7	624.8	633.4
10°	565.4	579.0	590.1	607.5	619.8
12.5°	533.2	546.8	562.9	585.2	601.3
15°	498.6	513.4	532.0	559.2	579.0
17.5°	460.2	476.3	497.4	527.0	548.1
20°	423.1	439.2	461.5	491.2	514.7
22.5°	384.8	398.4	421.9	451.6	480.0
25°	345.2	358.8	383.5	413.2	444.2
27.5°	305.6	319.2	343.9	374.9	409.5
30°	263.5	278.4	304.4	339.0	376.1
32.5°	223.9	238.8	266.0	304.4	341.5
35°	184.3	201.7	231.4	269.7	305.6
37.5°	146.0	165.8	199.2	235.1	267.2
40°	108.9	129.9	169.5	200.4	227.6
42.5°	71.8	96.5	142.3	168.3	189.3
45°	39.6	66.8	117.5	137.3	154.7
47.5°	22.3	43.3	92.8	108.9	118.8
50°	18.6	32.2	71.8	82.9	86.6
52.5°	14.8	29.7	54.4	60.6	58.1
55°	13.6	28.5	42.1	40.8	34.6
57.5°	11.1	28.5	33.4	29.7	29.7
60°	8.7	27.2	29.7	26.0	27.2
62.5°	7.4	26.0	27.2	24.7	24.7
65°	6.2	24.7	23.5	22.3	23.5
67.5°	4.9	22.3	22.3	21.0	21.0
70°	4.9	21.0	19.8	18.6	18.6
72.5°	4.9	18.6	18.6	17.3	17.3
75°	4.9	17.3	17.3	16.1	14.8
77.5°	4.9	14.8	16.1	14.8	13.6
80°	4.9	13.6	14.8	13.6	11.1
82.5°	4.9	12.4	13.6	12.4	9.9
85°	3.7	11.1	12.4	11.1	7.4
87.5°	3.7	11.1	12.4	9.9	6.2
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	6.98	8.20	7.35	8.51	8.83	8.05	9.27	8.42	9.58	9.90
	3H	8.31	9.39	8.69	9.72	10.09	10.08	11.16	10.46	11.50	11.86
	4H	8.88	9.89	9.28	10.24	10.63	11.03	12.04	11.44	12.39	12.78
	6H	9.44	10.37	9.85	10.74	11.13	11.98	12.91	12.39	13.28	13.67
	8H	9.76	10.64	10.19	11.03	11.44	12.43	13.31	12.86	13.70	14.10
	12H	10.07	10.91	10.50	11.29	11.72	12.85	13.69	13.28	14.07	14.50
4H	2H	7.94	8.95	8.35	9.30	9.69	8.73	9.74	9.13	10.09	10.47
	3H	9.97	10.80	10.38	11.20	11.61	11.01	11.84	11.42	12.25	12.65
	4H	11.04	11.79	11.48	12.21	12.66	12.16	12.91	12.59	13.33	13.77
	6H	11.91	12.56	12.37	13.00	13.47	13.32	13.97	13.79	14.42	14.89
	8H	12.32	12.92	12.79	13.37	13.84	13.89	14.49	14.36	14.94	15.41
	12H	12.70	13.23	13.18	13.72	14.19	14.43	14.96	14.92	15.45	15.92
8H	4H	11.81	12.42	12.28	12.87	13.34	12.71	13.31	13.18	13.76	14.23
	6H	13.15	13.65	13.65	14.14	14.63	14.16	14.66	14.66	15.15	15.64
	8H	13.87	14.31	14.39	14.83	15.32	14.92	15.37	15.45	15.89	16.38
	12H	14.56	14.95	15.07	15.45	16.02	15.71	16.10	16.23	16.60	17.17
12H	4H	11.97	12.50	12.46	12.99	13.46	12.82	13.35	13.30	13.83	14.31
	6H	13.47	13.92	14.00	14.43	14.93	14.39	14.83	14.91	15.35	15.84
	8H	14.38	14.77	14.89	15.26	15.84	15.29	15.69	15.81	16.18	16.76