

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: P1058539

Luminaire Tested: S122RDR-H865D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058539  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D840-X4F0-XX-UDD-SVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

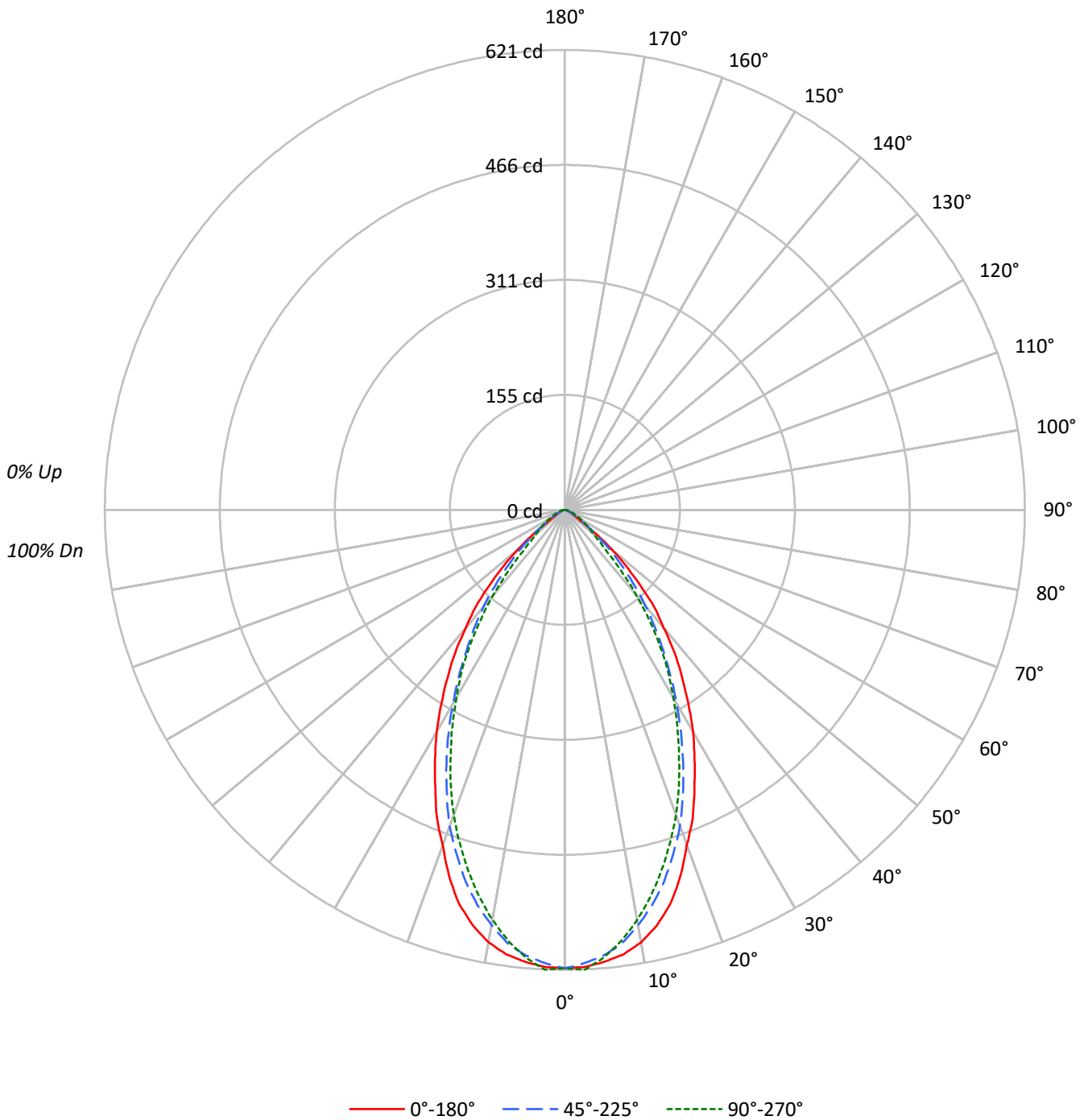
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 665.6 lumens  
Efficiency: N/A  
Efficacy: 21.3 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.85 / 0.91  
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				100
1	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92				92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84				84
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	80	78	76				76
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70				70
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	64				64
6	83	73	67	62	82	72	66	62	71	65	61	69	64	61	68	64	60	59				59
7	79	68	62	57	77	68	61	57	66	60	56	65	60	56	64	59	56	54				54
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50				50
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47				47
10	67	56	50	45	66	56	49	45	55	49	45	54	49	45	53	48	45	44				44

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

	0°	45°	90°
0°	11420	11420	11420
5°	11349	11190	11236
10°	11111	10671	10532
15°	10526	9913	9628
20°	9461	8927	8613
25°	8427	7696	7419
30°	7370	6422	6239
35°	6206	5204	5037
40°	4998	4107	3630
45°	3740	2967	2161
50°	2340	1915	1418
55°	795	1033	1152
60°	458	638	912
65°	323	432	703
70°	264	334	534
75°	178	264	442
80°	128	266	393
85°	0	0	254

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3740 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.0	8.6
10°-20°	146.0	21.9
20°-30°	175.8	26.4
30°-40°	150.2	22.6
40°-50°	88.0	13.2
50°-60°	31.9	4.8
60°-70°	11.3	1.7
70°-80°	4.5	0.7
80°-90°	0.8	0.1
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°	378.9	56.9
0°-40°	529.1	79.5
0°-60°	649.0	97.5
0°-90°	665.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	665.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	613	614	604	607	607	58
15°	551	542	519	509	504	153
25°	414	397	378	372	364	190
35°	276	254	231	228	224	172
45°	143	128	114	95	83	111
55°	25	35	32	33	36	31
65°	7	9	10	14	16	8
75°	2	4	4	5	6	3
85°	0	0	0	1	1	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	618.9	618.9	618.9	618.9	618.9
2.5°	617.7	618.9	612.7	618.9	621.4
5°	612.7	614.0	604.1	606.6	606.6
7.5°	605.3	604.1	590.5	588.0	586.8
10°	593.0	589.3	569.5	565.8	562.1
12.5°	574.4	567.0	546.0	539.9	534.9
15°	551.0	542.3	518.9	509.0	504.0
17.5°	518.9	509.0	486.7	476.9	471.9
20°	481.8	471.9	454.6	443.5	438.6
22.5°	450.9	434.9	416.3	408.9	402.7
25°	413.9	396.6	378.0	371.8	364.4
27.5°	379.3	358.3	339.7	334.8	328.6
30°	345.9	323.7	301.4	301.4	292.8
32.5°	310.1	289.1	265.6	264.4	259.4
35°	275.5	254.5	231.0	228.5	223.6
37.5°	243.4	222.4	200.1	192.7	186.5
40°	207.5	189.0	170.5	158.1	150.7
42.5°	179.1	158.1	139.6	124.8	114.9
45°	143.3	128.5	113.7	95.1	82.8
47.5°	111.2	101.3	88.9	67.9	61.8
50°	81.5	76.6	66.7	50.7	49.4
52.5°	51.9	54.4	48.2	39.5	43.2
55°	24.7	34.6	32.1	33.4	35.8
57.5°	16.1	17.3	23.5	27.2	29.6
60°	12.4	12.4	17.3	22.2	24.7
62.5°	9.9	9.9	13.6	18.5	19.8
65°	7.4	8.6	9.9	13.6	16.1
67.5°	6.2	6.2	7.4	11.1	12.4
70°	4.9	4.9	6.2	8.6	9.9
72.5°	3.7	3.7	4.9	7.4	7.4
75°	2.5	3.7	3.7	4.9	6.2
77.5°	2.5	2.5	2.5	3.7	4.9
80°	1.2	1.2	2.5	2.5	3.7
82.5°	1.2	1.2	1.2	1.2	2.5
85°	0.0	0.0	0.0	1.2	1.2
87.5°	0.0	0.0	0.0	0.0	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	4.35	5.51	4.72	5.83	6.14	7.74	8.91	8.11	9.22	9.53
	3H	4.87	5.89	5.25	6.22	6.59	8.47	9.49	8.85	9.83	10.19
	4H	5.00	5.95	5.41	6.30	6.69	8.69	9.64	9.09	9.99	10.37
	6H	5.08	5.95	5.50	6.32	6.71	8.84	9.70	9.25	10.08	10.47
	8H	5.08	5.90	5.51	6.29	6.70	8.87	9.69	9.30	10.08	10.49
	12H	5.05	5.83	5.48	6.21	6.64	8.87	9.65	9.30	10.03	10.46
4H	2H	4.66	5.61	5.07	5.96	6.35	7.71	8.66	8.12	9.01	9.40
	3H	5.32	6.08	5.73	6.49	6.90	8.58	9.35	9.00	9.76	10.16
	4H	5.56	6.24	5.99	6.66	7.11	8.86	9.55	9.30	9.97	10.41
	6H	5.68	6.26	6.14	6.71	7.18	9.09	9.67	9.55	10.12	10.59
	8H	5.69	6.23	6.16	6.68	7.16	9.13	9.68	9.61	10.13	10.60
	12H	5.65	6.13	6.14	6.62	7.09	9.15	9.63	9.64	10.12	10.59
8H	4H	5.66	6.21	6.14	6.66	7.13	8.79	9.34	9.27	9.79	10.26
	6H	5.83	6.27	6.34	6.77	7.25	9.05	9.49	9.56	9.99	10.48
	8H	5.87	6.26	6.40	6.78	7.28	9.11	9.51	9.64	10.03	10.52
	12H	5.84	6.19	6.36	6.69	7.26	9.17	9.52	9.69	10.02	10.59
12H	4H	5.65	6.13	6.14	6.61	7.09	8.75	9.22	9.24	9.71	10.19
	6H	5.83	6.22	6.36	6.74	7.24	9.00	9.40	9.53	9.92	10.41
	8H	5.89	6.24	6.41	6.74	7.31	9.09	9.44	9.61	9.93	10.51