

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: P1058584

Luminaire Tested: S122RDR-H865D940-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058584  
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-H865D940-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, 90 CRI LEDS  
Ballast/Driver: -

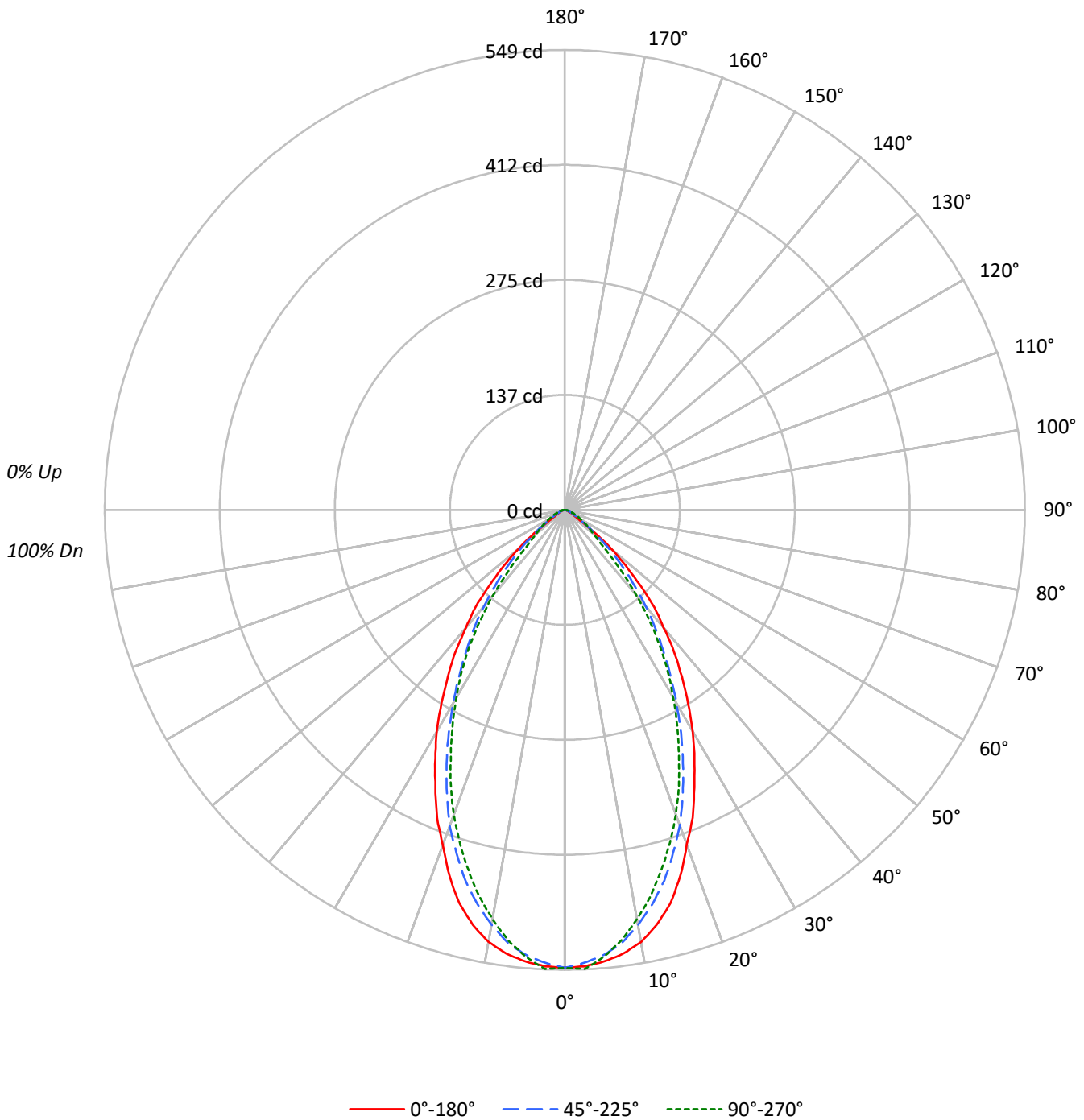
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 587.8 lumens  
Efficiency: N/A  
Efficacy: 18.8 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

TEST NUMBER: P1058584

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-SVL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1058584

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-SVL-B

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	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	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92																																				
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84																																				
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	80	78	76																																				
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70																																				
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	64																																				
6	83	73	67	62	82	72	66	62	71	65	61	69	64	61	68	64	60	59																																				
7	79	68	62	57	77	68	61	57	66	60	56	65	60	56	64	59	56	54																																				
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50																																				
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47																																				
10	67	56	50	45	66	56	49	45	55	49	45	54	49	45	53	48	45	44																																				

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

	0°	45°	90°
0°	10084	10084	10084
5°	10023	9880	9921
10°	9811	9423	9299
15°	9294	8753	8503
20°	8353	7882	7603
25°	7440	6796	6552
30°	6507	5672	5508
35°	5481	4595	4447
40°	4415	3625	3206
45°	3301	2620	1908
50°	2067	1691	1252
55°	701	914	1017
60°	402	565	805
65°	284	380	620
70°	237	297	469
75°	157	235	392
80°	117	234	351
85°	0	0	233

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3301 cd/sqm



TEST NUMBER: P1058584

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-SVL-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.4	8.6
10°-20°	128.9	21.9
20°-30°	155.3	26.4
30°-40°	132.6	22.6
40°-50°	77.7	13.2
50°-60°	28.1	4.8
60°-70°	10.0	1.7
70°-80°	4.0	0.7
80°-90°	0.7	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°	334.6	56.9
0°-40°	467.2	79.5
0°-60°	573.1	97.5
0°-90°	587.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	587.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	546	546	546	546	546	
5°	541	542	533	536	536	51
15°	486	479	458	449	445	135
25°	365	350	334	328	322	168
35°	243	225	204	202	197	152
45°	126	113	100	84	73	98
55°	22	30	28	30	32	27
65°	6	8	9	12	14	7
75°	2	3	3	4	6	3
85°	0	0	0	1	1	0
90°	0	0	0	0	0	



TEST NUMBER: P1058584

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-SVL-B

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	546.5	546.5	546.5	546.5	546.5
2.5°	545.4	546.5	541.1	546.5	548.7
5°	541.1	542.1	533.4	535.6	535.6
7.5°	534.5	533.4	521.4	519.2	518.1
10°	523.6	520.3	502.9	499.6	496.3
12.5°	507.2	500.7	482.1	476.7	472.3
15°	486.5	478.9	458.2	449.4	445.1
17.5°	458.2	449.4	429.8	421.1	416.7
20°	425.4	416.7	401.4	391.6	387.2
22.5°	398.2	384.0	367.6	361.1	355.6
25°	365.4	350.2	333.8	328.3	321.8
27.5°	334.9	316.3	300.0	295.6	290.2
30°	305.4	285.8	266.2	266.2	258.5
32.5°	273.8	255.3	234.5	233.4	229.1
35°	243.3	224.7	204.0	201.8	197.4
37.5°	214.9	196.4	176.7	170.2	164.7
40°	183.3	166.9	150.5	139.6	133.1
42.5°	158.2	139.6	123.3	110.2	101.4
45°	126.5	113.4	100.4	84.0	73.1
47.5°	98.2	89.4	78.5	60.0	54.5
50°	72.0	67.6	58.9	44.7	43.6
52.5°	45.8	48.0	42.5	34.9	38.2
55°	21.8	30.5	28.4	29.5	31.6
57.5°	14.2	15.3	20.7	24.0	26.2
60°	10.9	10.9	15.3	19.6	21.8
62.5°	8.7	8.7	12.0	16.4	17.5
65°	6.5	7.6	8.7	12.0	14.2
67.5°	5.5	5.5	6.5	9.8	10.9
70°	4.4	4.4	5.5	7.6	8.7
72.5°	3.3	3.3	4.4	6.5	6.5
75°	2.2	3.3	3.3	4.4	5.5
77.5°	2.2	2.2	2.2	3.3	4.4
80°	1.1	1.1	2.2	2.2	3.3
82.5°	1.1	1.1	1.1	1.1	2.2
85°	0.0	0.0	0.0	1.1	1.1
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058584  
 CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-SVL-B

**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	3.92	5.09	4.29	5.40	5.71	7.31	8.47	7.67	8.78	9.10
	3H	4.45	5.47	4.83	5.81	6.17	8.03	9.06	8.42	9.39	9.76
	4H	4.59	5.54	4.99	5.89	6.28	8.25	9.20	8.66	9.55	9.94
	6H	4.66	5.53	5.08	5.90	6.30	8.41	9.27	8.82	9.65	10.04
	8H	4.67	5.49	5.10	5.88	6.29	8.44	9.26	8.87	9.65	10.06
	12H	4.64	5.42	5.07	5.80	6.23	8.44	9.22	8.88	9.61	10.04
4H	2H	4.23	5.18	4.63	5.53	5.91	7.28	8.22	7.68	8.58	8.96
	3H	4.90	5.67	5.31	6.07	6.48	8.15	8.92	8.56	9.32	9.73
	4H	5.14	5.83	5.58	6.25	6.69	8.43	9.12	8.87	9.54	9.98
	6H	5.26	5.85	5.73	6.30	6.77	8.66	9.25	9.13	9.70	10.17
	8H	5.28	5.83	5.75	6.28	6.75	8.71	9.25	9.18	9.70	10.18
	12H	5.25	5.72	5.74	6.21	6.69	8.73	9.21	9.22	9.69	10.17
8H	4H	5.25	5.80	5.72	6.25	6.72	8.36	8.91	8.84	9.36	9.83
	6H	5.42	5.86	5.93	6.36	6.85	8.63	9.07	9.14	9.57	10.05
	8H	5.47	5.86	5.99	6.38	6.88	8.69	9.09	9.22	9.61	10.10
	12H	5.44	5.79	5.96	6.29	6.86	8.75	9.10	9.27	9.60	10.18
12H	4H	5.24	5.71	5.73	6.20	6.68	8.32	8.79	8.81	9.28	9.76
	6H	5.42	5.81	5.95	6.33	6.83	8.58	8.98	9.11	9.49	9.99
	8H	5.49	5.84	6.01	6.34	6.91	8.67	9.02	9.19	9.51	10.09