

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: P1058540

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058540
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-59)
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-S
Description: DEFINE 2 SILVER 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

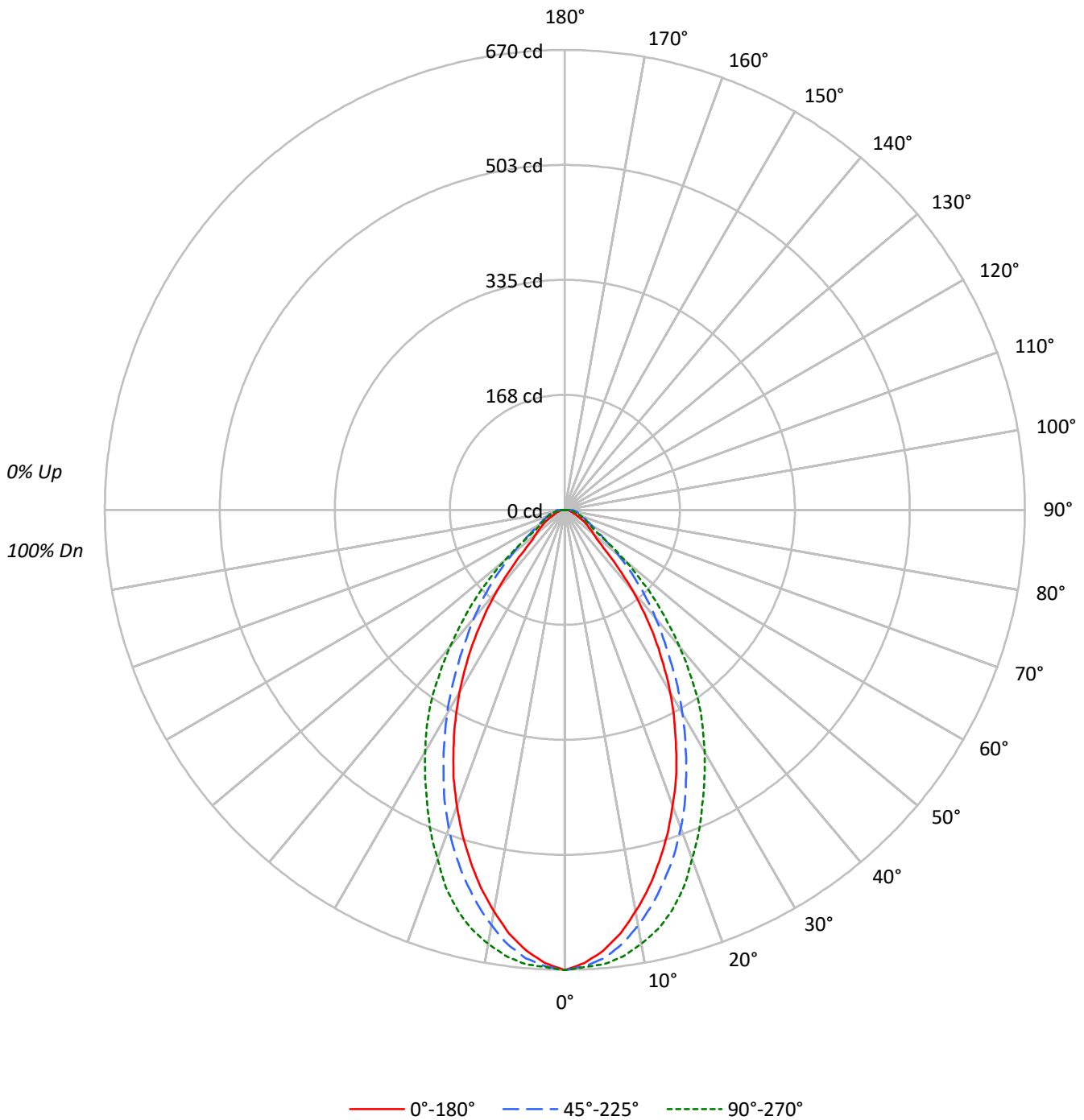
Lumens per Lamp: N/A
Luminaire Lumens: 808.8 lumens
Efficiency: N/A
Efficacy: 25.9 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.97 / 0.94
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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: P1058540

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-SVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1058540

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-SVL-S

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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				
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	75	80	77	74	72				
4	91	82	75	70	89	81	74	69	78	73	68	76	71	68	74	70	67	65				
5	86	75	68	63	84	74	68	63	72	66	62	71	65	61	69	64	61	59				
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54				
7	76	65	57	52	74	64	57	52	62	56	52	61	56	52	60	55	51	50				
8	71	60	53	48	70	59	53	48	58	52	48	57	52	48	56	51	47	46				
9	67	56	49	45	66	56	49	44	55	49	44	54	48	44	53	48	44	42				
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12372	12372	12372
5°	11938	12144	12305
10°	11126	11520	12029
15°	10138	10681	11533
20°	9011	9693	10639
25°	7808	8513	9647
30°	6537	7302	8672
35°	5154	6046	7634
40°	3695	4945	6258
45°	2163	3907	4843
50°	1562	2842	3267
55°	1313	2030	1711
60°	1052	1642	1461
65°	865	1458	1349
70°	734	1403	1268
75°	706	1497	1233
80°	786	1838	1318
85°	1313	2879	1842

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4843 cd/sqm



TEST NUMBER: P1058540

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-SVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	7.6
10°-20°	157.4	19.5
20°-30°	193.4	23.9
30°-40°	171.0	21.1
40°-50°	109.1	13.5
50°-60°	53.3	6.6
60°-70°	31.7	3.9
70°-80°	20.3	2.5
80°-90°	11.2	1.4
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°	412.3	51.0
0°-40°	583.3	72.1
0°-60°	745.7	92.2
0°-90°	808.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	808.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	670	670	670	670	670	
5°	644	658	656	658	664	60
15°	531	546	559	584	604	148
25°	384	397	418	444	474	175
35°	229	241	268	306	339	142
45°	83	106	150	168	186	70
55°	41	54	63	59	53	37
65°	20	37	33	31	31	20
75°	10	22	21	19	17	11
85°	6	12	14	12	9	6
90°	0	0	0	0	0	

TEST NUMBER: P1058540

CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-SVL-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	670.5	670.5	670.5	670.5	670.5
2.5°	660.6	672.9	665.5	665.5	666.8
5°	644.5	658.1	655.6	658.1	664.3
7.5°	622.2	635.8	638.3	648.2	655.6
10°	593.8	607.4	614.8	630.9	642.0
12.5°	564.1	577.7	588.8	609.9	625.9
15°	530.7	545.5	559.1	583.9	603.7
17.5°	496.0	510.9	528.2	552.9	576.5
20°	458.9	472.5	493.6	517.1	541.8
22.5°	423.1	435.4	457.7	480.0	509.7
25°	383.5	397.1	418.1	444.1	473.8
27.5°	345.1	358.7	379.8	409.5	440.4
30°	306.8	319.2	342.7	373.6	407.0
32.5°	267.2	279.6	305.5	338.9	373.6
35°	228.8	241.2	268.4	305.5	338.9
37.5°	190.5	204.1	235.0	269.7	298.1
40°	153.4	169.5	205.3	235.0	259.8
42.5°	116.3	138.5	176.9	201.6	221.4
45°	82.9	106.4	149.7	168.2	185.6
47.5°	63.1	81.6	123.7	137.3	148.4
50°	54.4	66.8	99.0	108.9	113.8
52.5°	47.0	59.4	79.2	82.9	80.4
55°	40.8	54.4	63.1	59.4	53.2
57.5°	34.6	50.7	52.0	44.5	45.8
60°	28.5	45.8	44.5	38.3	39.6
62.5°	23.5	42.1	38.3	34.6	34.6
65°	19.8	37.1	33.4	30.9	30.9
67.5°	16.1	33.4	29.7	27.2	27.2
70°	13.6	29.7	26.0	23.5	23.5
72.5°	12.4	26.0	23.5	21.0	21.0
75°	9.9	22.3	21.0	18.6	17.3
77.5°	8.7	18.6	18.6	17.3	14.8
80°	7.4	16.1	17.3	14.8	12.4
82.5°	7.4	14.8	14.8	13.6	9.9
85°	6.2	12.4	13.6	12.4	8.7
87.5°	3.7	11.1	11.1	9.9	6.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058540
 CATALOG NUMBER: S122RDR-H865D840-X4F0-XX-UDD-SVL-S

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	10.76	12.04	11.13	12.36	12.67	10.29	11.57	10.65	11.88	12.20
	3H	11.94	13.08	12.32	13.41	13.78	11.85	12.99	12.23	13.32	13.69
	4H	12.37	13.44	12.78	13.79	14.17	12.54	13.60	12.94	13.95	14.33
	6H	12.72	13.70	13.14	14.07	14.46	13.18	14.16	13.60	14.53	14.92
	8H	12.91	13.84	13.35	14.23	14.64	13.47	14.40	13.90	14.79	15.19
	12H	13.13	14.02	13.57	14.40	14.83	13.79	14.68	14.22	15.06	15.49
4H	2H	11.27	12.33	11.67	12.68	13.06	10.89	11.95	11.29	12.30	12.69
	3H	12.92	13.79	13.33	14.19	14.60	12.69	13.56	13.10	13.97	14.37
	4H	13.68	14.47	14.12	14.89	15.33	13.53	14.32	13.97	14.74	15.18
	6H	14.28	14.96	14.75	15.41	15.88	14.39	15.07	14.85	15.51	15.98
	8H	14.58	15.22	15.05	15.67	16.14	14.78	15.41	15.25	15.86	16.33
	12H	14.90	15.46	15.38	15.94	16.42	15.22	15.78	15.70	16.26	16.74
8H	4H	14.10	14.74	14.57	15.18	15.65	13.99	14.63	14.46	15.07	15.55
	6H	15.05	15.57	15.55	16.07	16.55	15.10	15.62	15.60	16.12	16.60
	8H	15.59	16.06	16.11	16.58	17.07	15.68	16.15	16.20	16.66	17.15
	12H	16.16	16.57	16.67	17.07	17.64	16.35	16.76	16.86	17.26	17.83
12H	4H	14.17	14.73	14.66	15.21	15.69	14.07	14.64	14.56	15.12	15.59
	6H	15.23	15.70	15.75	16.22	16.71	15.28	15.75	15.80	16.27	16.76
	8H	15.92	16.34	16.44	16.83	17.40	15.99	16.41	16.51	16.90	17.47