

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: P1058305

Luminaire Tested: S122RDR-H290D850-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058305
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-H290D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

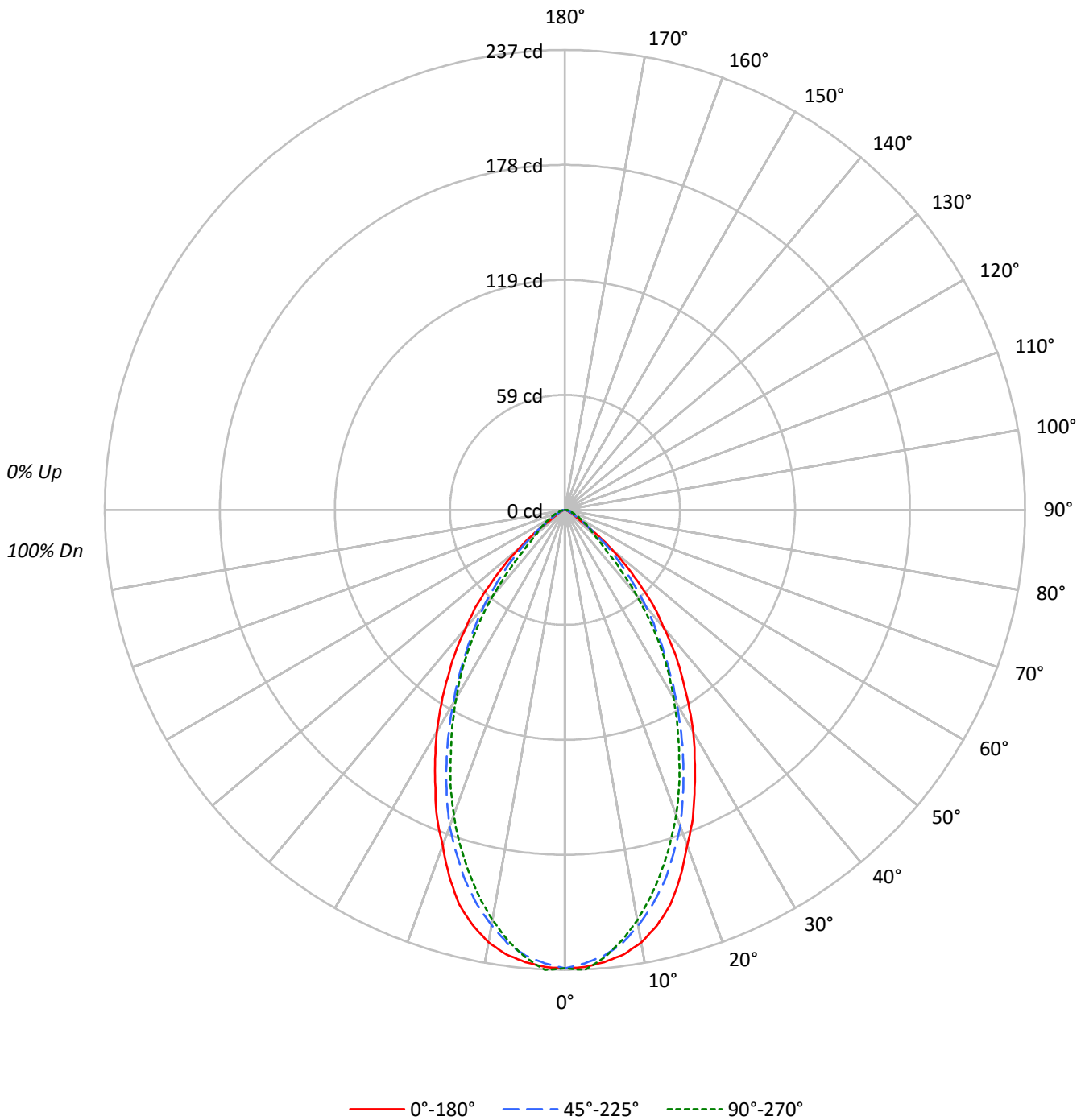
Lumens per Lamp: N/A
Luminaire Lumens: 254.2 lumens
Efficiency: N/A
Efficacy: 21.7 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 0.85 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P1058305

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-SVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1058305

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-SVL-B

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	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°	4360	4360	4360
5°	4333	4271	4290
10°	4242	4073	4021
15°	4019	3784	3675
20°	3613	3409	3287
25°	3217	2938	2832
30°	2815	2452	2382
35°	2370	1987	1924
40°	1908	1568	1385
45°	1427	1133	825
50°	893	732	543
55°	302	396	441
60°	173	244	347
65°	122	166	266
70°	103	129	205
75°	64	100	171
80°	53	96	149
85°	0	0	106

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1427 cd/sqm



TEST NUMBER: P1058305

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-SVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.8	8.6
10°-20°	55.8	21.9
20°-30°	67.1	26.4
30°-40°	57.4	22.6
40°-50°	33.6	13.2
50°-60°	12.2	4.8
60°-70°	4.3	1.7
70°-80°	1.7	0.7
80°-90°	0.3	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°	144.7	56.9
0°-40°	202.0	79.5
0°-60°	247.8	97.5
0°-90°	254.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	254.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	236	236	236	236	236	
5°	234	234	231	232	232	22
15°	210	207	198	194	192	58
25°	158	151	144	142	139	73
35°	105	97	88	87	85	66
45°	55	49	43	36	32	42
55°	9	13	12	13	14	12
65°	3	3	4	5	6	3
75°	1	1	1	2	2	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P1058305

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-SVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	236.3	236.3	236.3	236.3	236.3
2.5°	235.8	236.3	233.9	236.3	237.3
5°	233.9	234.4	230.6	231.6	231.6
7.5°	231.1	230.6	225.5	224.5	224.0
10°	226.4	225.0	217.4	216.0	214.6
12.5°	219.3	216.5	208.5	206.1	204.2
15°	210.4	207.1	198.1	194.3	192.4
17.5°	198.1	194.3	185.8	182.1	180.2
20°	184.0	180.2	173.6	169.3	167.4
22.5°	172.2	166.0	159.0	156.1	153.8
25°	158.0	151.4	144.3	142.0	139.1
27.5°	144.8	136.8	129.7	127.8	125.5
30°	132.1	123.6	115.1	115.1	111.8
32.5°	118.4	110.4	101.4	100.9	99.1
35°	105.2	97.2	88.2	87.3	85.4
37.5°	92.9	84.9	76.4	73.6	71.2
40°	79.2	72.2	65.1	60.4	57.5
42.5°	68.4	60.4	53.3	47.6	43.9
45°	54.7	49.1	43.4	36.3	31.6
47.5°	42.5	38.7	34.0	25.9	23.6
50°	31.1	29.2	25.5	19.3	18.9
52.5°	19.8	20.8	18.4	15.1	16.5
55°	9.4	13.2	12.3	12.7	13.7
57.5°	6.1	6.6	9.0	10.4	11.3
60°	4.7	4.7	6.6	8.5	9.4
62.5°	3.8	3.8	5.2	7.1	7.5
65°	2.8	3.3	3.8	5.2	6.1
67.5°	2.4	2.4	2.8	4.2	4.7
70°	1.9	1.9	2.4	3.3	3.8
72.5°	1.4	1.4	1.9	2.8	2.8
75°	0.9	1.4	1.4	1.9	2.4
77.5°	0.9	0.9	0.9	1.4	1.9
80°	0.5	0.5	0.9	0.9	1.4
82.5°	0.5	0.5	0.5	0.5	0.9
85°	0.0	0.0	0.0	0.5	0.5
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: P1058305
 CATALOG NUMBER: S122RDR-H290D850-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	0.99	2.15	1.35	2.46	2.78	4.41	5.57	4.77	5.88	6.20
	3H	1.53	2.55	1.91	2.88	3.25	5.13	6.15	5.51	6.48	6.85
	4H	1.65	2.60	2.06	2.95	3.34	5.35	6.29	5.75	6.65	7.03
	6H	1.72	2.59	2.14	2.96	3.35	5.50	6.36	5.91	6.74	7.13
	8H	1.73	2.55	2.16	2.94	3.35	5.52	6.34	5.96	6.73	7.14
	12H	1.70	2.48	2.13	2.86	3.29	5.52	6.30	5.96	6.69	7.12
4H	2H	1.31	2.25	1.71	2.61	2.99	4.37	5.32	4.78	5.67	6.06
	3H	1.98	2.75	2.40	3.16	3.56	5.24	6.01	5.66	6.42	6.82
	4H	2.21	2.89	2.65	3.32	3.76	5.53	6.21	5.96	6.63	7.08
	6H	2.32	2.91	2.79	3.36	3.83	5.75	6.33	6.21	6.78	7.25
	8H	2.35	2.89	2.82	3.34	3.82	5.79	6.33	6.26	6.78	7.26
	12H	2.32	2.79	2.81	3.28	3.76	5.81	6.29	6.30	6.77	7.25
8H	4H	2.31	2.86	2.78	3.31	3.78	5.45	6.00	5.93	6.45	6.92
	6H	2.47	2.91	2.98	3.41	3.90	5.71	6.15	6.21	6.65	7.13
	8H	2.53	2.93	3.06	3.44	3.94	5.76	6.16	6.29	6.68	7.17
	12H	2.51	2.86	3.03	3.36	3.93	5.83	6.18	6.35	6.68	7.25
12H	4H	2.29	2.77	2.78	3.26	3.73	5.41	5.88	5.90	6.37	6.85
	6H	2.47	2.86	3.00	3.38	3.88	5.66	6.05	6.18	6.57	7.07
	8H	2.56	2.90	3.07	3.40	3.98	5.74	6.09	6.26	6.58	7.16