

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: P1059562

Luminaire Tested: S123RDR-H1165D950-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D950-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

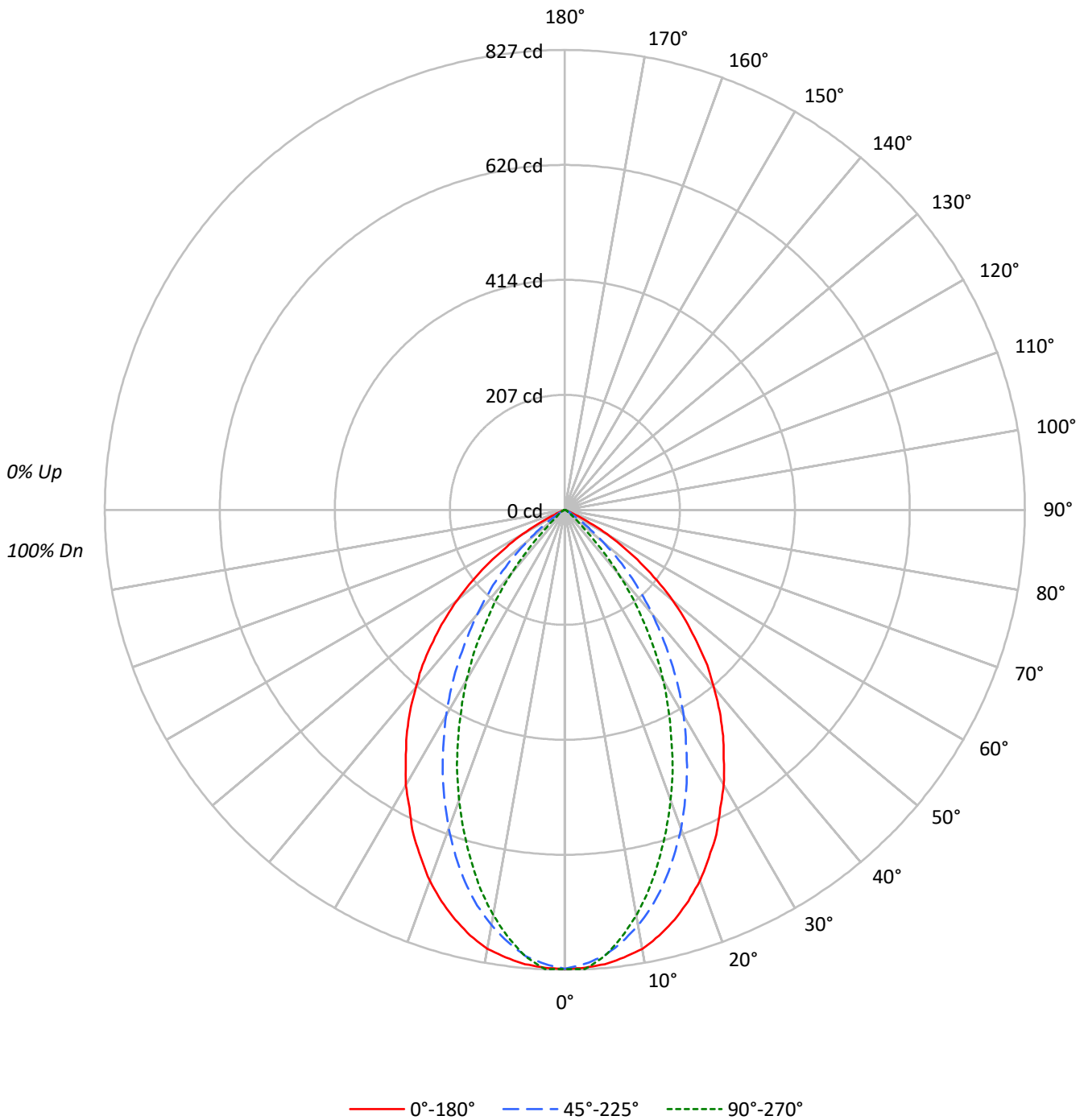
Lumens per Lamp: N/A
Luminaire Lumens: 941.9 lumens
Efficiency: N/A
Efficacy: 25.8 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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: P1059562

CATALOG NUMBER: S123RDR-H1165D950-X4F0-XX-UDD-BVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1059562

CATALOG NUMBER: S123RDR-H1165D950-X4F0-XX-UDD-BVL-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	100	100	98	97	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	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9692	9692	9692
5°	9667	9495	9510
10°	9557	9049	8827
15°	9274	8418	7933
20°	8870	7624	6943
25°	8352	6733	5872
30°	7749	5786	4794
35°	7107	4782	3564
40°	6377	3749	2282
45°	5561	2737	950
50°	4613	1628	364
55°	3400	680	272
60°	2060	249	155
65°	553	147	75
70°	0	45	45
75°	0	0	59
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5561 cd/sqm



TEST NUMBER: P1059562

CATALOG NUMBER: S123RDR-H1165D950-X4F0-XX-UDD-BVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.0	8.1
10°-20°	196.1	20.8
20°-30°	244.4	25.9
30°-40°	218.5	23.2
40°-50°	137.9	14.6
50°-60°	57.7	6.1
60°-70°	10.9	1.2
70°-80°	0.4	0.0
80°-90°	0.0	0.0
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°	516.5	54.8
0°-40°	735.0	78.0
0°-60°	930.6	98.8
0°-90°	941.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	941.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	820	819	806	808	807	78
15°	763	744	692	663	653	214
25°	645	593	520	474	453	295
35°	496	424	334	274	249	309
45°	335	260	165	88	57	258
55°	166	114	33	13	13	149
65°	20	15	5	3	3	28
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P1059562

CATALOG NUMBER: S123RDR-H1165D950-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	825.4	825.4	825.4	825.4	825.4
2.5°	824.1	825.4	817.4	825.4	826.7
5°	820.1	818.8	805.5	808.1	806.8
7.5°	812.1	808.1	784.2	778.9	776.2
10°	801.5	790.8	758.9	745.7	740.3
12.5°	784.2	769.6	728.4	707.1	699.1
15°	762.9	744.3	692.5	663.2	652.6
17.5°	737.7	711.1	652.6	620.7	604.8
20°	709.8	672.6	610.1	571.5	555.6
22.5°	676.5	635.3	564.9	523.7	506.4
25°	644.6	592.8	519.7	474.5	453.2
27.5°	604.8	550.3	471.8	425.3	402.7
30°	571.5	509.1	426.7	374.8	353.6
32.5°	531.7	466.5	380.1	323.0	303.0
35°	495.8	424.0	333.6	273.8	248.6
37.5°	457.2	382.8	287.1	224.6	200.7
40°	416.0	341.6	244.6	175.4	148.9
42.5°	378.8	300.4	202.0	130.3	103.7
45°	334.9	260.5	164.8	87.7	57.2
47.5°	295.1	223.3	124.9	49.2	30.6
50°	252.5	184.8	89.1	25.3	19.9
52.5°	208.7	147.5	58.5	17.3	15.9
55°	166.1	114.3	33.2	13.3	13.3
57.5°	124.9	82.4	17.3	10.6	9.3
60°	87.7	54.5	10.6	8.0	6.6
62.5°	50.5	31.9	8.0	5.3	5.3
65°	19.9	14.6	5.3	2.7	2.7
67.5°	1.3	4.0	2.7	1.3	1.3
70°	0.0	0.0	1.3	1.3	1.3
72.5°	0.0	0.0	1.3	1.3	1.3
75°	0.0	0.0	0.0	0.0	1.3
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
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: P1059562
 CATALOG NUMBER: S123RDR-H1165D950-X4F0-XX-UDD-BVL-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	13.08	14.26	13.45	14.57	14.89	0.00	0.00	0.00	0.00	0.00
	3H	12.92	13.95	13.30	14.28	14.65	0.00	0.00	0.00	0.00	0.00
	4H	12.84	13.79	13.24	14.14	14.53	0.00	0.00	0.00	0.00	0.00
	6H	12.74	13.61	13.16	13.99	14.38	0.00	0.00	0.00	0.00	0.00
	8H	12.69	13.51	13.13	13.91	14.31	0.00	0.00	0.00	0.00	0.00
	12H	12.64	13.43	13.08	13.81	14.24	0.00	0.00	0.00	0.00	0.00
4H	2H	12.84	13.79	13.24	14.15	14.53	0.00	0.00	0.00	0.00	0.00
	3H	12.67	13.44	13.09	13.85	14.25	0.00	0.00	0.00	0.00	0.00
	4H	12.57	13.25	13.01	13.67	14.12	0.00	0.00	0.00	0.00	0.00
	6H	12.47	13.06	12.94	13.51	13.98	0.00	0.00	0.00	0.00	0.00
	8H	12.41	12.95	12.88	13.40	13.88	0.00	0.00	0.00	0.00	0.00
	12H	12.35	12.83	12.84	13.31	13.79	0.00	0.00	0.00	0.00	0.00
8H	4H	12.41	12.95	12.88	13.40	13.88	0.00	0.00	0.00	0.00	0.00
	6H	12.29	12.73	12.80	13.23	13.72	0.00	0.00	0.00	0.00	0.00
	8H	12.22	12.62	12.75	13.14	13.63	0.00	0.00	0.00	0.00	0.00
	12H	12.17	12.52	12.68	13.01	13.59	0.00	0.00	0.00	0.00	0.00
12H	4H	12.35	12.83	12.84	13.31	13.79	0.00	0.00	0.00	0.00	0.00
	6H	12.22	12.62	12.75	13.14	13.63	0.00	0.00	0.00	0.00	0.00
	8H	12.17	12.52	12.68	13.01	13.59	0.00	0.00	0.00	0.00	0.00