

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059501

Luminaire Tested: S123RDRP-H1165D835-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059501  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-H1165D835-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

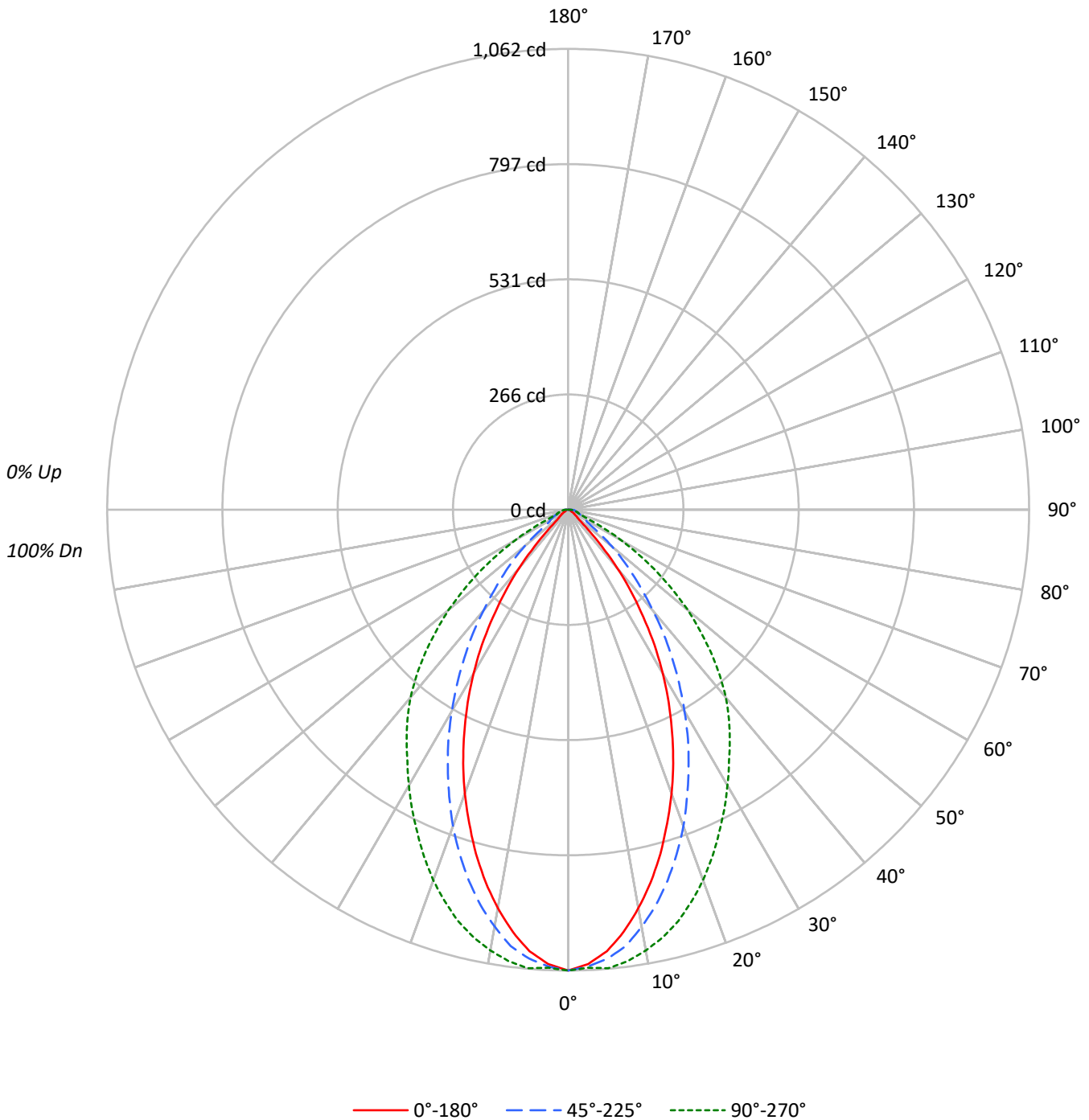
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1275.0 lumens  
Efficiency: N/A  
Efficacy: 34.9 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 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 (A<sub>in</sub>): 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: P1059501

CATALOG NUMBER: S123RDRP-H1165D835-X4F0-XX-UDD-BVL-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1059501

CATALOG NUMBER: S123RDRP-H1165D835-X4F0-XX-UDD-BVL-W

**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	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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92					90				
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83					81				
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75					73				
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68					66				
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62					60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57					55				
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52					50				
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48					47				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45					43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42					40				

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

	0°	45°	90°
0°	12470	12470	12470
5°	12041	12238	12502
10°	11115	11631	12297
15°	9976	10755	11926
20°	8702	9696	11353
25°	7341	8498	10649
30°	5904	7266	9952
35°	4321	5982	9302
40°	2695	4663	8664
45°	1020	3476	7717
50°	484	2397	6576
55°	371	1314	5085
60°	263	1113	3342
65°	194	970	1395
70°	192	910	910
75°	254	948	948
80°	379	1129	1041
85°	754	1886	1509

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7717 cd/sqm



TEST NUMBER: P1059501

CATALOG NUMBER: S123RDRP-H1165D835-X4F0-XX-UDD-BVL-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.5	7.6
10°-20°	250.0	19.6
20°-30°	309.4	24.3
30°-40°	277.4	21.8
40°-50°	181.9	14.3
50°-60°	91.0	7.1
60°-70°	35.5	2.8
70°-80°	20.0	1.6
80°-90°	12.4	1.0
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°	656.9	51.5
0°-40°	934.3	73.3
0°-60°	1207.2	94.7
0°-90°	1275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1275.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1022	1038	1038	1049	1061	95
15°	821	854	885	943	981	228
25°	567	602	656	749	822	259
35°	301	342	417	543	649	188
45°	61	99	209	359	465	58
55°	18	22	64	176	248	17
65°	7	21	35	46	50	7
75°	6	21	21	21	21	6
85°	6	14	14	14	11	5
90°	0	0	0	0	0	



TEST NUMBER: P1059501

CATALOG NUMBER: S123RDRP-H1165D835-X4F0-XX-UDD-BVL-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1062.0	1062.0	1062.0	1062.0	1062.0
2.5°	1048.0	1063.4	1053.6	1055.0	1056.4
5°	1021.5	1038.2	1038.2	1049.4	1060.6
7.5°	981.0	1000.6	1014.5	1034.1	1049.4
10°	932.2	955.9	975.5	1010.3	1031.3
12.5°	879.2	908.5	933.6	979.6	1008.9
15°	820.6	854.0	884.7	943.4	981.0
17.5°	757.8	791.2	831.7	900.1	946.1
20°	696.4	729.8	775.9	852.6	908.5
22.5°	632.2	667.0	715.9	801.0	866.6
25°	566.6	601.5	655.9	749.4	821.9
27.5°	501.0	535.9	597.3	699.1	778.7
30°	435.4	470.3	535.9	644.7	734.0
32.5°	369.8	407.5	475.9	594.5	689.4
35°	301.4	341.9	417.3	542.8	648.9
37.5°	238.6	276.3	361.4	498.2	608.4
40°	175.8	216.3	304.2	454.9	565.2
42.5°	114.4	157.7	252.6	407.5	516.3
45°	61.4	99.1	209.3	358.6	464.7
47.5°	33.5	54.4	168.9	307.0	411.7
50°	26.5	30.7	131.2	262.4	360.0
52.5°	22.3	25.1	93.5	220.5	302.8
55°	18.1	22.3	64.2	175.8	248.4
57.5°	15.4	19.5	50.2	136.8	194.0
60°	11.2	16.7	47.4	100.5	142.3
62.5°	8.4	18.1	41.9	69.8	93.5
65°	7.0	20.9	34.9	46.1	50.2
67.5°	5.6	22.3	30.7	29.3	29.3
70°	5.6	20.9	26.5	25.1	26.5
72.5°	5.6	22.3	23.7	22.3	23.7
75°	5.6	20.9	20.9	20.9	20.9
77.5°	5.6	19.5	19.5	18.1	18.1
80°	5.6	16.7	16.7	16.7	15.4
82.5°	5.6	15.4	15.4	15.4	12.6
85°	5.6	14.0	14.0	14.0	11.2
87.5°	4.2	12.6	14.0	12.6	8.4
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059501  
 CATALOG NUMBER: S123RDRP-H1165D835-X4F0-XX-UDD-BVL-W

**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	1.12	2.37	1.48	2.68	3.00	15.37	16.63	15.74	16.94	17.26
	3H	3.45	4.56	3.83	4.89	5.26	15.45	16.56	15.83	16.89	17.26
	4H	4.56	5.59	4.96	5.94	6.32	15.53	16.56	15.93	16.92	17.30
	6H	5.55	6.50	5.96	6.87	7.26	15.63	16.58	16.05	16.95	17.35
	8H	6.03	6.93	6.46	7.32	7.73	15.69	16.59	16.12	16.98	17.39
	12H	6.59	7.45	7.03	7.83	8.27	15.77	16.63	16.21	17.02	17.45
4H	2H	4.37	5.41	4.78	5.76	6.14	15.23	16.26	15.63	16.61	17.00
	3H	6.69	7.53	7.10	7.94	8.34	15.40	16.25	15.82	16.65	17.06
	4H	8.06	8.81	8.49	9.23	9.68	15.55	16.31	15.99	16.73	17.17
	6H	9.14	9.79	9.61	10.24	10.71	15.78	16.43	16.24	16.88	17.35
	8H	9.60	10.21	10.07	10.66	11.13	15.90	16.51	16.37	16.96	17.43
	12H	10.10	10.64	10.59	11.12	11.60	16.08	16.62	16.57	17.10	17.58
8H	4H	9.03	9.64	9.50	10.09	10.56	15.55	16.16	16.02	16.61	17.08
	6H	10.55	11.05	11.05	11.55	12.03	15.89	16.39	16.39	16.88	17.37
	8H	11.33	11.78	11.85	12.29	12.79	16.12	16.57	16.64	17.09	17.58
	12H	12.14	12.54	12.65	13.03	13.60	16.46	16.86	16.97	17.35	17.92
12H	4H	9.21	9.74	9.69	10.23	10.70	15.53	16.07	16.02	16.56	17.03
	6H	10.87	11.32	11.39	11.83	12.32	15.91	16.36	16.43	16.87	17.36
	8H	11.83	12.23	12.34	12.72	13.29	16.22	16.62	16.73	17.11	17.68