

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: P1058534

Luminaire Tested: S122RDR-H865D835-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058534  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-58)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D835-X4F0-XX-UDD-WVL-S  
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

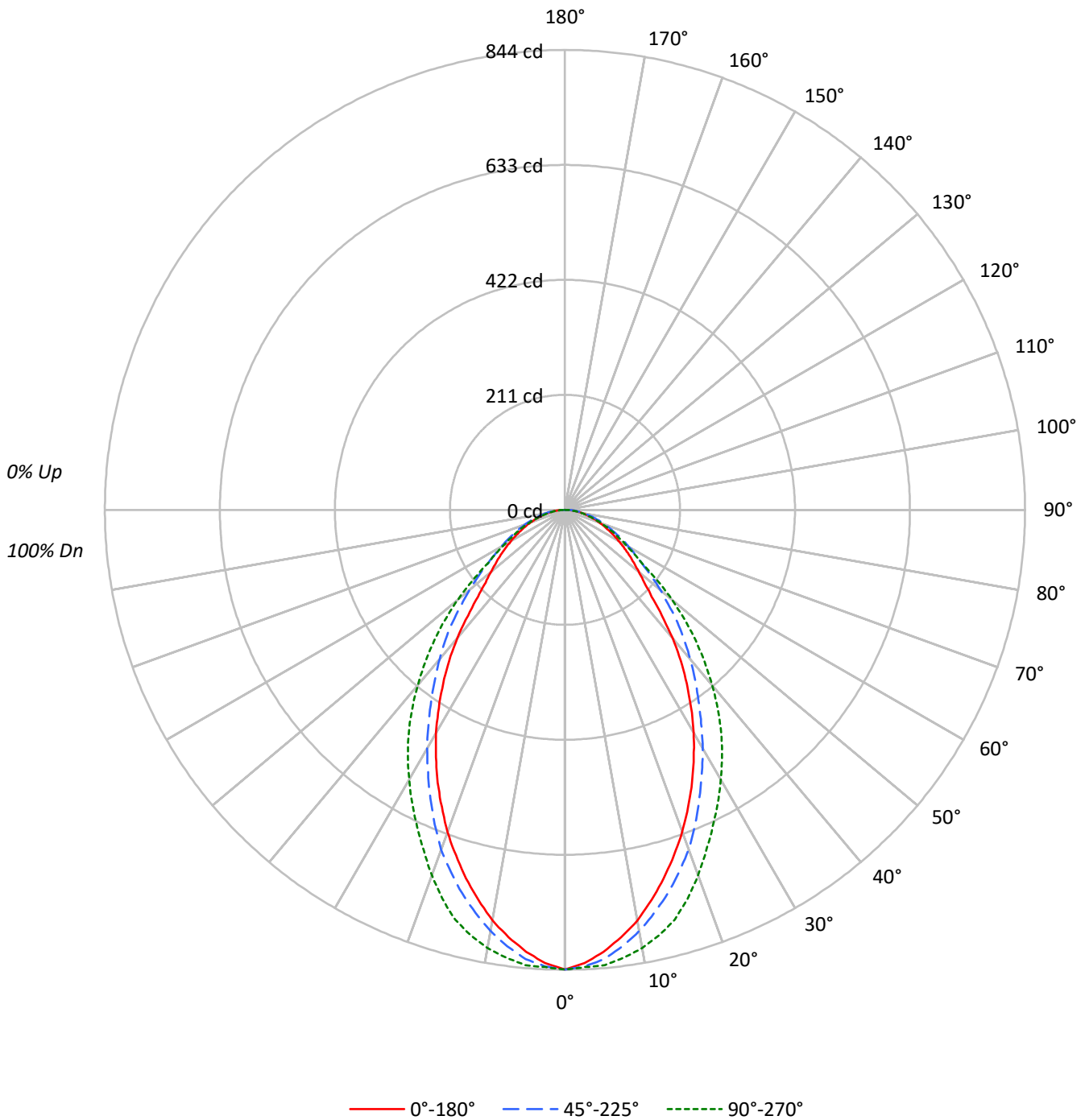
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1373.6 lumens  
Efficiency: N/A  
Efficacy: 44.0 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05  
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: P1058534

CATALOG NUMBER: S122RDR-H865D835-X4F0-XX-UDD-WVL-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1058534

CATALOG NUMBER: S122RDR-H865D835-X4F0-XX-UDD-WVL-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				100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	79	84	80	78	76				76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				66
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59				59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43				43
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39				39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36				36
10	59	47	40	35	58	46	39	35	45	39	35	45	39	34	44	38	34	33				33

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

	0°	45°	90°
0°	15565	15565	15565
5°	15080	15330	15533
10°	14338	14705	15301
15°	13378	13915	14874
20°	12357	13031	14017
25°	11241	11890	13061
30°	10070	10773	12181
35°	8769	9625	11252
40°	7402	8611	10115
45°	5879	7604	8849
50°	5061	6537	7346
55°	4607	5591	5633
60°	4203	4971	4790
65°	3847	4488	4222
70°	3566	4160	3766
75°	3315	3928	3315
80°	3124	3772	2997
85°	3112	3896	2583

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8849 cd/sqm



TEST NUMBER: P1058534

CATALOG NUMBER: S122RDR-H865D835-X4F0-XX-UDD-WVL-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.9	5.7
10°-20°	205.9	15.0
20°-30°	270.9	19.7
30°-40°	272.4	19.8
40°-50°	220.8	16.1
50°-60°	152.1	11.1
60°-70°	99.5	7.2
70°-80°	55.4	4.0
80°-90°	18.8	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°	554.6	40.4
0°-40°	827.0	60.2
0°-60°	1199.8	87.4
0°-90°	1373.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1373.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	844	844	844	844	844	
5°	814	830	828	831	839	76
15°	700	717	728	755	779	196
25°	552	567	584	610	642	253
35°	389	408	427	465	500	243
45°	225	251	291	317	339	178
55°	143	159	174	178	175	128
65°	88	105	103	98	97	88
75°	46	58	55	49	46	50
85°	15	20	18	16	12	16
90°	0	0	0	0	0	



TEST NUMBER: P1058534

CATALOG NUMBER: S122RDR-H865D835-X4F0-XX-UDD-WVL-S

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	843.5	843.5	843.5	843.5	843.5
2.5°	832.5	847.2	838.6	838.6	839.9
5°	814.1	830.1	827.6	831.3	838.6
7.5°	790.9	808.0	808.0	819.0	828.8
10°	765.2	782.3	784.8	801.9	816.6
12.5°	733.3	750.5	757.8	779.9	799.4
15°	700.3	717.4	728.4	755.4	778.6
17.5°	664.8	681.9	696.6	724.8	748.0
20°	629.3	645.2	663.6	688.0	713.8
22.5°	590.1	607.2	624.4	647.6	677.0
25°	552.1	566.8	584.0	609.7	641.5
27.5°	511.7	527.7	543.6	574.2	607.2
30°	472.6	488.5	505.6	537.5	571.7
32.5°	430.9	448.1	465.2	500.7	536.2
35°	389.3	407.7	427.3	465.2	499.5
37.5°	348.9	368.5	391.8	430.9	460.3
40°	307.3	328.1	357.5	391.8	419.9
42.5°	263.2	288.9	324.4	353.8	379.5
45°	225.3	251.0	291.4	317.1	339.1
47.5°	197.1	217.9	257.1	279.1	297.5
50°	176.3	192.2	227.7	243.6	255.9
52.5°	159.2	175.1	199.6	210.6	214.2
55°	143.2	159.2	173.8	177.5	175.1
57.5°	127.3	144.5	153.0	149.4	149.4
60°	113.9	132.2	134.7	129.8	129.8
62.5°	100.4	118.8	118.8	112.6	112.6
65°	88.1	105.3	102.8	97.9	96.7
67.5°	77.1	93.0	89.4	84.5	83.3
70°	66.1	80.8	77.1	71.0	69.8
72.5°	56.3	69.8	64.9	60.0	57.5
75°	46.5	57.5	55.1	49.0	46.5
77.5°	38.0	46.5	44.1	39.2	36.7
80°	29.4	36.7	35.5	30.6	28.2
82.5°	22.0	28.2	26.9	23.3	19.6
85°	14.7	19.6	18.4	15.9	12.2
87.5°	7.3	13.5	12.2	11.0	6.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058534  
 CATALOG NUMBER: S122RDR-H865D835-X4F0-XX-UDD-WVL-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	16.27	17.71	16.63	18.02	18.34	16.63	18.07	16.99	18.38	18.70
	3H	17.81	19.10	18.19	19.43	19.79	17.97	19.26	18.35	19.59	19.96
	4H	18.38	19.59	18.78	19.94	20.32	18.46	19.66	18.86	20.01	20.39
	6H	18.81	19.93	19.23	20.30	20.69	18.81	19.93	19.22	20.29	20.69
	8H	18.97	20.03	19.39	20.42	20.82	18.93	19.99	19.35	20.38	20.78
	12H	19.08	20.10	19.51	20.48	20.91	19.00	20.02	19.43	20.40	20.83
4H	2H	16.85	18.06	17.25	18.41	18.79	17.14	18.35	17.54	18.70	19.08
	3H	18.67	19.68	19.09	20.08	20.48	18.71	19.72	19.13	20.12	20.52
	4H	19.42	20.32	19.85	20.74	21.18	19.32	20.22	19.75	20.64	21.08
	6H	20.01	20.79	20.47	21.23	21.70	19.80	20.58	20.26	21.03	21.49
	8H	20.22	20.95	20.68	21.39	21.86	19.96	20.70	20.43	21.14	21.61
	12H	20.39	21.04	20.87	21.52	21.99	20.09	20.74	20.57	21.22	21.69
8H	4H	19.70	20.44	20.17	20.88	21.35	19.62	20.35	20.09	20.80	21.27
	6H	20.46	21.07	20.96	21.56	22.04	20.24	20.84	20.74	21.33	21.81
	8H	20.79	21.33	21.30	21.84	22.33	20.49	21.03	21.00	21.54	22.03
	12H	21.07	21.55	21.58	22.04	22.61	20.70	21.18	21.21	21.67	22.24
12H	4H	19.72	20.38	20.21	20.86	21.33	19.65	20.31	20.14	20.79	21.26
	6H	20.52	21.06	21.04	21.58	22.07	20.31	20.86	20.83	21.37	21.86
	8H	20.92	21.40	21.43	21.89	22.46	20.63	21.11	21.15	21.61	22.17