

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: P1058589

Luminaire Tested: S122RDR-H865D940-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058589  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-55 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D940-X4F0-XX-UDD-WVL-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

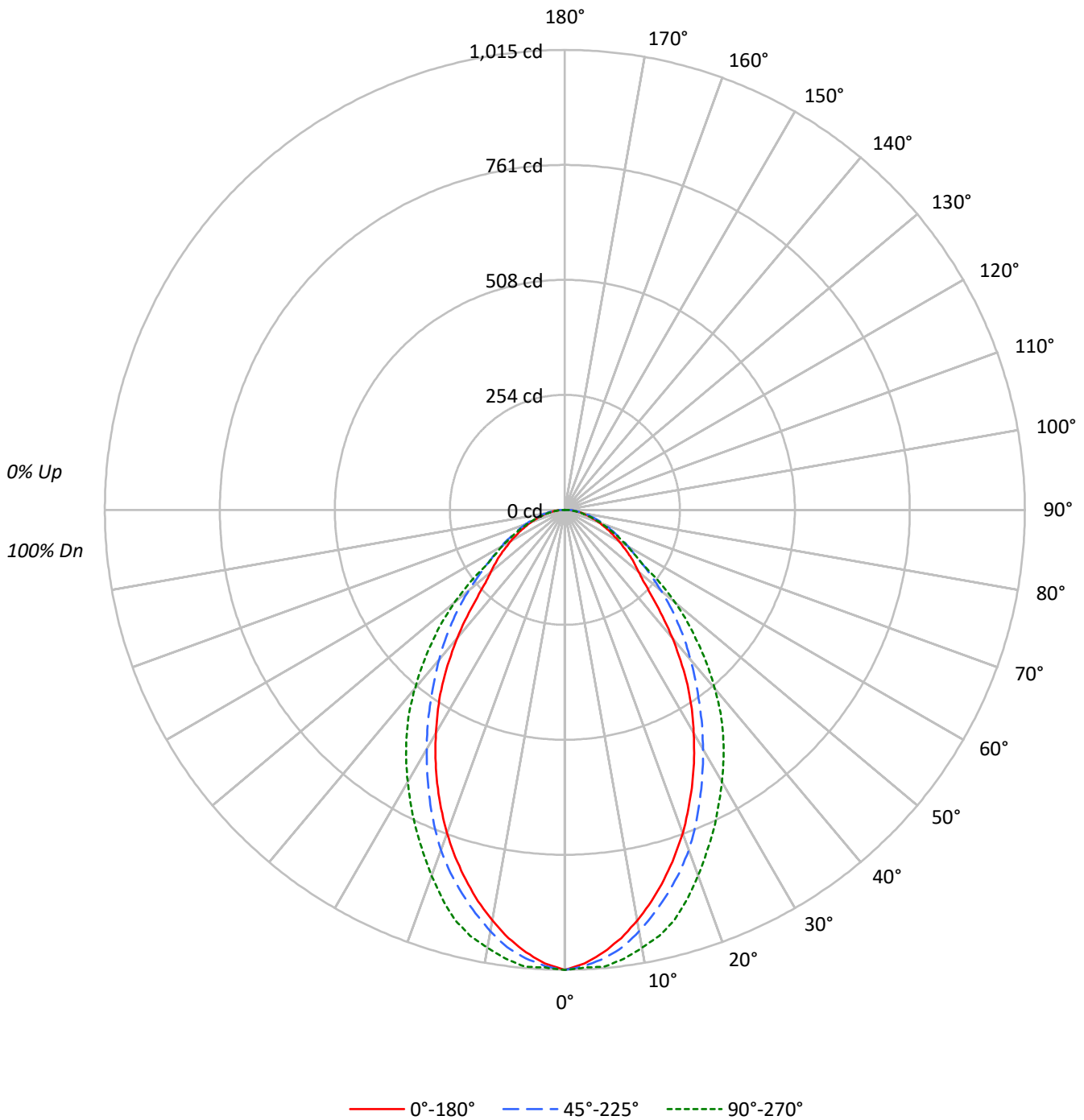
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1655.3 lumens  
Efficiency: N/A  
Efficacy: 53.1 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: P1058589

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-WVL-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1058589

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-WVL-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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	67				
4	88	77	69	64	85	76	69	63	73	67	62	71	66	62	69	65	61	59				
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52				
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47				
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43				
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39				
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36				
10	59	47	40	35	58	46	40	35	46	39	35	45	39	35	44	38	34	33				

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

	0°	45°	90°
0°	18735	18735	18735
5°	18160	18403	18747
10°	17246	17695	18390
15°	16142	16748	17894
20°	14922	15694	16872
25°	13560	14360	15826
30°	12119	12980	14772
35°	10623	11633	13723
40°	8888	10387	12386
45°	7122	9201	10827
50°	6112	7929	9089
55°	5585	6743	6708
60°	5078	5964	5842
65°	4624	5340	5100
70°	4241	4888	4537
75°	3971	4513	3971
80°	3709	4176	3485
85°	3705	4383	3006

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10827 cd/sqm



TEST NUMBER: P1058589

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-WVL-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	5.7
10°-20°	248.2	15.0
20°-30°	327.3	19.8
30°-40°	329.6	19.9
40°-50°	268.2	16.2
50°-60°	182.9	11.0
60°-70°	118.7	7.2
70°-80°	65.4	3.9
80°-90°	21.3	1.3
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°	669.2	40.4
0°-40°	998.7	60.3
0°-60°	1449.9	87.6
0°-90°	1655.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1655.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1015	1015	1015	1015	1015	
5°	980	999	994	1002	1012	92
15°	845	867	877	913	937	237
25°	666	688	705	737	777	305
35°	472	496	516	561	609	293
45°	273	307	353	383	415	215
55°	174	191	210	211	208	155
65°	106	126	122	116	117	105
75°	56	69	63	57	56	59
85°	18	23	21	16	14	19
90°	0	0	0	0	0	



TEST NUMBER: P1058589

CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-WVL-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1015.3	1015.3	1015.3	1015.3	1015.3
2.5°	1002.2	1018.6	1007.7	1008.8	1011.0
5°	980.4	999.0	993.5	1002.2	1012.1
7.5°	953.1	971.7	973.9	987.0	999.0
10°	920.4	941.1	944.4	964.0	981.5
12.5°	884.3	907.3	911.6	940.0	962.9
15°	845.0	866.9	876.7	912.7	936.7
17.5°	803.5	824.3	839.6	872.3	899.6
20°	759.9	779.5	799.2	828.6	859.2
22.5°	712.9	734.8	753.3	782.8	817.7
25°	666.0	687.8	705.3	736.9	777.3
27.5°	617.9	639.8	657.2	691.1	734.8
30°	568.8	591.7	609.2	647.4	693.3
32.5°	520.8	543.7	563.3	603.7	651.8
35°	471.6	495.7	516.4	561.2	609.2
37.5°	419.2	446.5	472.7	517.5	564.4
40°	369.0	399.6	431.2	472.7	514.2
42.5°	318.8	352.6	391.9	426.9	465.1
45°	272.9	306.8	352.6	383.2	414.9
47.5°	236.9	265.3	314.4	339.5	367.9
50°	212.9	232.5	276.2	295.9	316.6
52.5°	193.2	209.6	240.2	253.3	264.2
55°	173.6	191.1	209.6	210.7	208.5
57.5°	153.9	173.6	183.4	175.8	180.1
60°	137.6	157.2	161.6	153.9	158.3
62.5°	120.1	141.9	141.9	134.3	136.5
65°	105.9	125.6	122.3	115.7	116.8
67.5°	91.7	111.4	105.9	99.4	99.4
70°	78.6	97.2	90.6	84.1	84.1
72.5°	66.6	81.9	77.5	69.9	68.8
75°	55.7	68.8	63.3	56.8	55.7
77.5°	44.8	55.7	51.3	45.9	43.7
80°	34.9	44.8	39.3	34.9	32.8
82.5°	26.2	33.8	29.5	25.1	22.9
85°	17.5	22.9	20.7	16.4	14.2
87.5°	8.7	15.3	13.1	10.9	8.7
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058589  
 CATALOG NUMBER: S122RDR-H865D940-X4F0-XX-UDD-WVL-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	16.90	18.34	17.27	18.65	18.97	17.15	18.59	17.51	18.90	19.21
	3H	18.43	19.72	18.81	20.04	20.41	18.51	19.79	18.89	20.12	20.49
	4H	18.99	20.20	19.39	20.55	20.93	18.99	20.19	19.39	20.54	20.92
	6H	19.42	20.53	19.83	20.90	21.29	19.34	20.45	19.75	20.82	21.21
	8H	19.57	20.62	20.00	21.01	21.42	19.44	20.50	19.87	20.89	21.29
	12H	19.68	20.69	20.11	21.07	21.50	19.51	20.53	19.94	20.91	21.34
4H	2H	17.47	18.68	17.87	19.03	19.41	17.67	18.88	18.07	19.23	19.61
	3H	19.28	20.27	19.69	20.68	21.08	19.25	20.25	19.66	20.65	21.05
	4H	20.02	20.92	20.45	21.33	21.77	19.84	20.74	20.27	21.16	21.60
	6H	20.61	21.39	21.06	21.83	22.29	20.31	21.09	20.77	21.53	22.00
	8H	20.82	21.54	21.28	21.99	22.46	20.46	21.19	20.93	21.63	22.10
	12H	20.98	21.63	21.46	22.11	22.58	20.57	21.22	21.05	21.70	22.17
8H	4H	20.28	21.01	20.75	21.46	21.93	20.13	20.86	20.60	21.31	21.77
	6H	21.04	21.64	21.54	22.13	22.61	20.72	21.32	21.22	21.82	22.30
	8H	21.36	21.90	21.88	22.42	22.91	20.94	21.48	21.46	22.00	22.48
	12H	21.65	22.12	22.16	22.62	23.18	21.13	21.60	21.64	22.10	22.66
12H	4H	20.30	20.95	20.78	21.43	21.90	20.17	20.81	20.65	21.29	21.77
	6H	21.09	21.63	21.60	22.14	22.63	20.79	21.33	21.31	21.84	22.33
	8H	21.48	21.96	21.99	22.45	23.02	21.07	21.55	21.59	22.05	22.61