

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: P1055272

Luminaire Tested: S122R3DR-S865D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055272  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S865D940-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

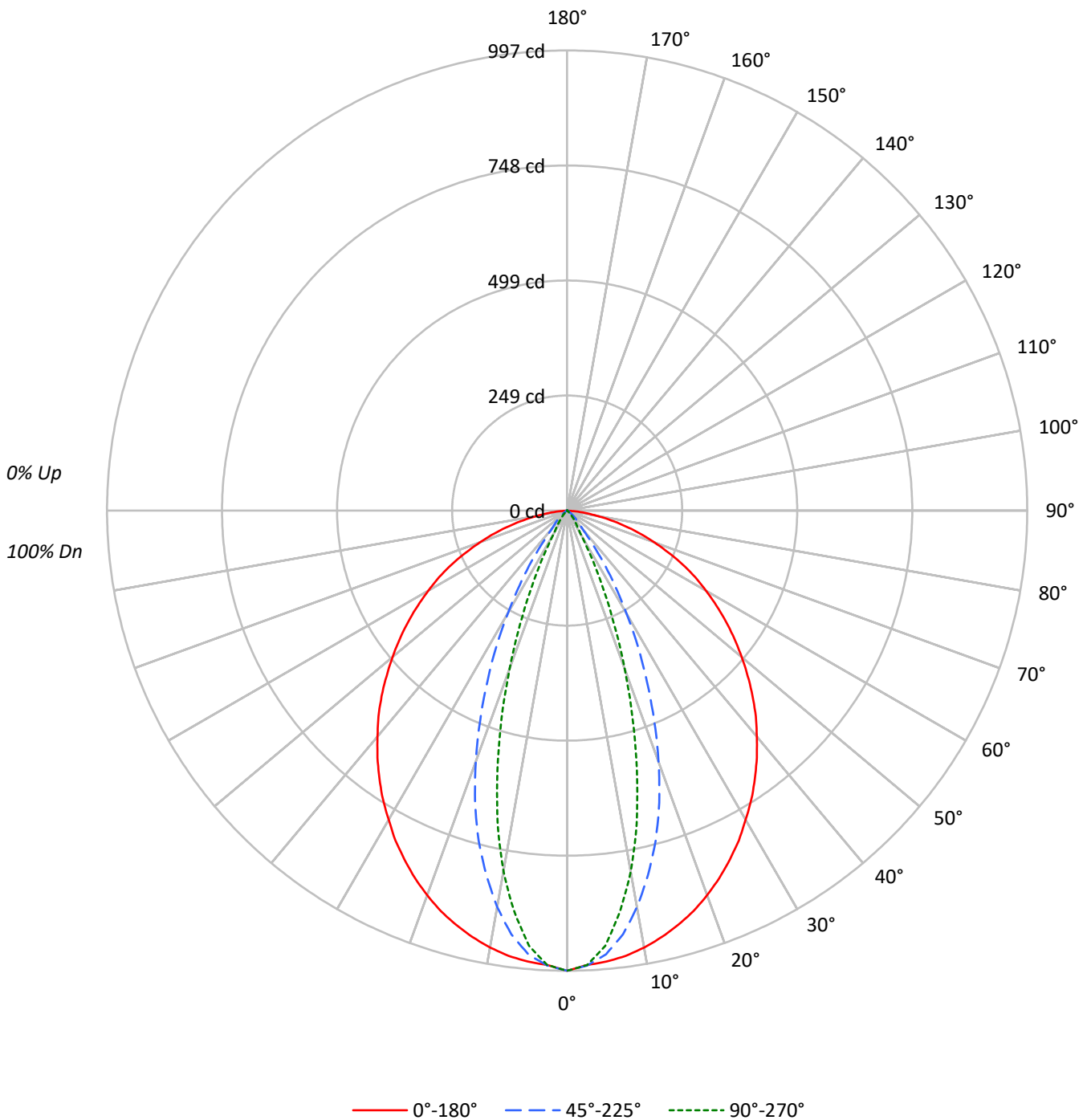
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 906.9 lumens  
Efficiency: N/A  
Efficacy: 26.1 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.7  
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: P1055272

CATALOG NUMBER: S122R3DR-S865D940-X4F0-XX-UDD-F-B

### Luminous Intensity Polar Plot





TEST NUMBER: P105272

CATALOG NUMBER: S122R3DR-S865D940-X4F0-XX-UDD-F-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	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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43					43			

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

	0°	45°	90°
0°	18887	18887	18887
5°	18655	18351	18001
10°	18496	16776	15277
15°	18227	14520	11441
20°	17881	11668	7325
25°	17438	8552	3761
30°	16922	5590	1227
35°	16405	3102	715
40°	15814	1246	396
45°	15229	828	153
50°	14557	472	68
55°	13890	228	36
60°	13156	87	0
65°	12382	49	0
70°	11106	61	0
75°	9560	81	0
80°	7255	0	0
85°	3000	239	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15229 cd/sqm



TEST NUMBER: P1055272

CATALOG NUMBER: S122R3DR-S865D940-X4F0-XX-UDD-F-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.4	9.9
10°-20°	207.7	22.9
20°-30°	210.8	23.2
30°-40°	158.2	17.4
40°-50°	110.8	12.2
50°-60°	67.8	7.5
60°-70°	40.4	4.5
70°-80°	18.6	2.1
80°-90°	3.3	0.4
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°	507.9	56.0
0°-40°	666.1	73.4
0°-60°	844.6	93.1
0°-90°	906.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	906.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	981	990	965	946	946	93
15°	929	879	740	627	583	262
25°	834	688	409	234	180	384
35°	709	462	134	40	31	443
45°	568	244	31	9	6	438
55°	420	74	7	2	1	376
65°	276	22	1	1	0	272
75°	131	2	1	1	0	139
85°	14	0	1	1	0	23
90°	0	0	0	0	0	



TEST NUMBER: P1055272

CATALOG NUMBER: S122R3DR-S865D940-X4F0-XX-UDD-F-B

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	996.9	996.9	996.9	996.9	996.9
2.5°	985.5	1000.4	986.6	984.3	985.5
5°	980.9	990.1	964.9	946.5	946.5
7.5°	972.9	972.9	925.9	888.1	876.6
10°	961.4	948.8	872.0	811.3	794.1
12.5°	946.5	916.7	809.0	723.1	695.6
15°	929.3	878.9	740.3	626.8	583.3
17.5°	909.9	836.5	663.5	522.5	472.1
20°	886.9	790.7	578.7	416.0	363.3
22.5°	861.7	740.3	492.7	320.9	264.7
25°	834.2	687.5	409.1	233.8	179.9
27.5°	805.6	632.5	332.3	160.4	110.0
30°	773.5	575.2	255.5	95.1	56.1
32.5°	742.6	520.2	191.4	51.6	41.3
35°	709.3	461.8	134.1	40.1	30.9
37.5°	674.9	406.8	82.5	29.8	22.9
40°	639.4	350.6	50.4	21.8	16.0
42.5°	605.0	297.9	40.1	14.9	10.3
45°	568.4	244.1	30.9	9.2	5.7
47.5°	530.6	194.8	22.9	5.7	3.4
50°	493.9	151.3	16.0	3.4	2.3
52.5°	457.2	111.2	10.3	2.3	1.1
55°	420.5	74.5	6.9	2.3	1.1
57.5°	383.9	52.7	4.6	1.1	1.1
60°	347.2	41.3	2.3	1.1	0.0
62.5°	312.8	32.1	2.3	1.1	1.1
65°	276.2	21.8	1.1	1.1	0.0
67.5°	237.2	13.8	1.1	1.1	0.0
70°	200.5	8.0	1.1	1.1	0.0
72.5°	165.0	4.6	1.1	1.1	0.0
75°	130.6	2.3	1.1	1.1	0.0
77.5°	97.4	1.1	0.0	1.1	0.0
80°	66.5	0.0	0.0	1.1	0.0
82.5°	39.0	0.0	0.0	1.1	0.0
85°	13.8	0.0	1.1	1.1	0.0
87.5°	0.0	0.0	1.1	1.1	0.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1055272

CATALOG NUMBER: S122R3DR-S865D940-X4F0-XX-UDD-F-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	16.42	17.68	16.79	17.99	18.31	0.00	0.00	0.00	0.00	0.00
	3H	20.16	21.28	20.54	21.61	21.98	0.00	0.00	0.00	0.00	0.00
	4H	21.47	22.51	21.88	22.86	23.25	0.00	0.00	0.00	0.00	0.00
	6H	22.33	23.28	22.74	23.65	24.05	0.00	0.00	0.00	0.00	0.00
	8H	22.54	23.45	22.97	23.84	24.24	0.00	0.00	0.00	0.00	0.00
	12H	22.61	23.47	23.04	23.85	24.28	0.00	0.00	0.00	0.00	0.00
4H	2H	16.17	17.22	16.58	17.57	17.95	0.00	0.00	0.00	0.00	0.00
	3H	19.92	20.77	20.33	21.17	21.58	0.00	0.00	0.00	0.00	0.00
	4H	21.21	21.97	21.65	22.39	22.84	0.00	0.00	0.00	0.00	0.00
	6H	22.13	22.79	22.59	23.23	23.70	0.00	0.00	0.00	0.00	0.00
	8H	22.39	23.00	22.86	23.45	23.92	0.00	0.00	0.00	0.00	0.00
	12H	22.49	23.03	22.98	23.51	23.99	0.00	0.00	0.00	0.00	0.00
8H	4H	21.07	21.68	21.54	22.13	22.60	0.00	0.00	0.00	0.00	0.00
	6H	21.97	22.46	22.47	22.96	23.44	0.00	0.00	0.00	0.00	0.00
	8H	22.23	22.67	22.75	23.19	23.68	0.00	0.00	0.00	0.00	0.00
	12H	22.34	22.73	22.86	23.23	23.80	0.00	0.00	0.00	0.00	0.00
12H	4H	21.02	21.56	21.51	22.04	22.52	0.00	0.00	0.00	0.00	0.00
	6H	21.90	22.35	22.43	22.87	23.36	0.00	0.00	0.00	0.00	0.00
	8H	22.18	22.57	22.70	23.07	23.64	0.00	0.00	0.00	0.00	0.00