

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: P1055403

Luminaire Tested: S122R3DR-H865D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055403  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H865D930-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

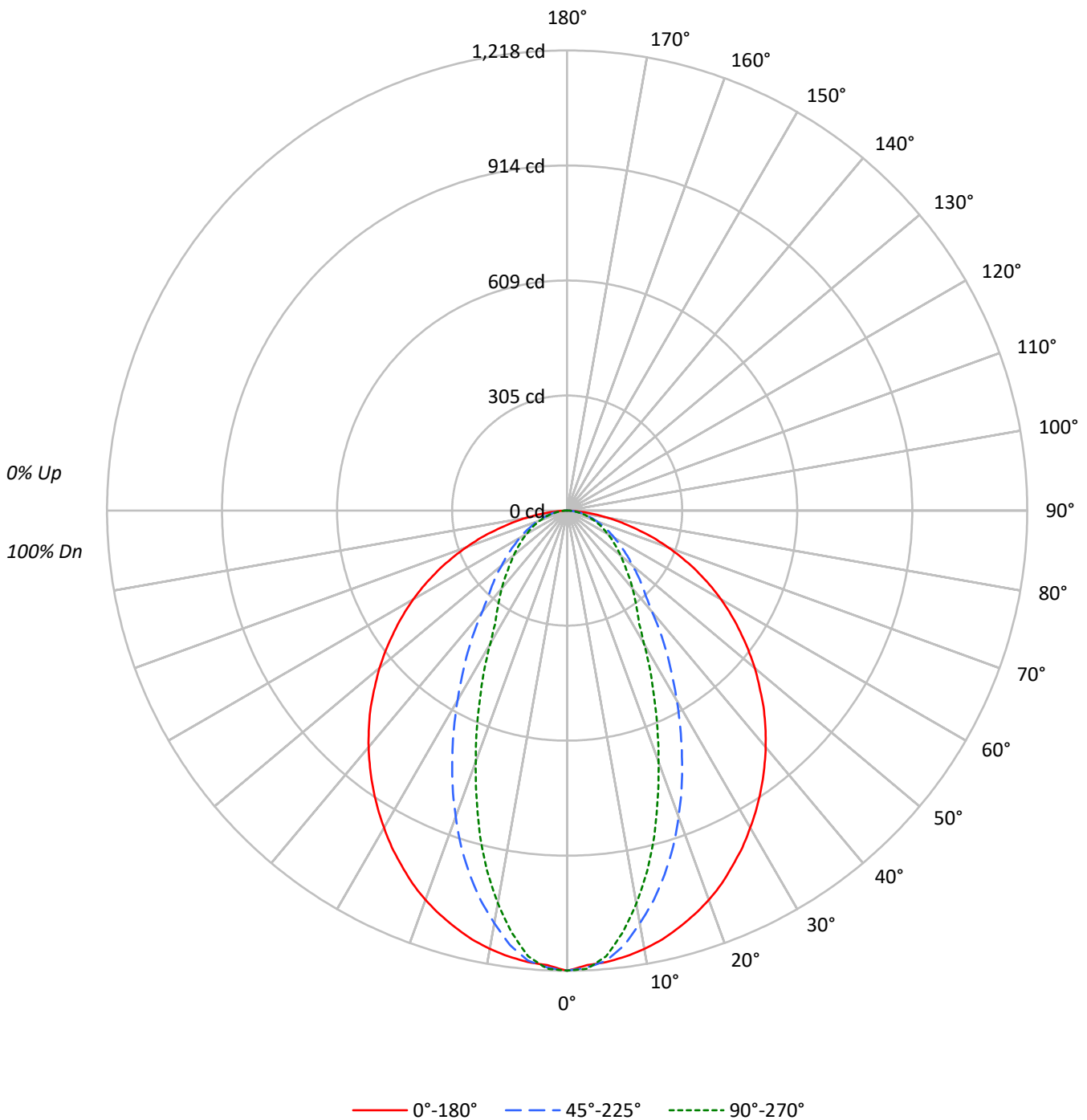
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1841.9 lumens  
Efficiency: N/A  
Efficacy: 59.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.9  
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: P1055403

CATALOG NUMBER: S122R3DR-H865D930-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1055403

CATALOG NUMBER: S122R3DR-H865D930-X4F0-XX-UDD-F-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

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

	0°	45°	90°
0°	23070	23070	23070
5°	22810	22732	22519
10°	22663	21331	20314
15°	22407	19551	17474
20°	22109	17387	14266
25°	21667	15026	11387
30°	21205	12697	8889
35°	20723	10621	7466
40°	20221	8612	6648
45°	19696	7529	5948
50°	19117	6661	5432
55°	18464	6022	5044
60°	17824	5479	4706
65°	16981	5021	4429
70°	15737	4681	4171
75°	13937	4246	3953
80°	11882	4004	3666
85°	8195	3543	3326

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19696 cd/sqm



TEST NUMBER: P1055403

CATALOG NUMBER: S122R3DR-H865D930-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.6	6.1
10°-20°	281.7	15.3
20°-30°	347.2	18.8
30°-40°	333.1	18.1
40°-50°	287.3	15.6
50°-60°	222.9	12.1
60°-70°	152.6	8.3
70°-80°	82.9	4.5
80°-90°	22.7	1.2
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°	740.5	40.2
0°-40°	1073.6	58.3
0°-60°	1583.7	86.0
0°-90°	1841.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1841.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1199	1217	1195	1180	1184	114
15°	1142	1108	997	915	891	322
25°	1036	926	719	586	545	478
35°	896	711	459	342	323	560
45°	735	495	281	232	222	567
55°	559	297	182	158	153	500
65°	379	162	112	102	99	374
75°	190	74	58	55	54	204
85°	38	18	16	16	15	48
90°	0	0	0	0	0	



TEST NUMBER: P1055403

CATALOG NUMBER: S122R3DR-H865D930-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1217.7	1217.7	1217.7	1217.7	1217.7
2.5°	1204.5	1224.9	1210.6	1210.6	1213.7
5°	1199.4	1216.7	1195.3	1180.1	1184.1
7.5°	1190.3	1202.5	1159.7	1127.1	1126.1
10°	1178.0	1179.1	1108.8	1066.0	1055.9
12.5°	1162.8	1146.5	1056.9	992.7	977.5
15°	1142.4	1107.8	996.8	915.3	890.9
17.5°	1121.0	1068.1	932.7	830.8	797.2
20°	1096.6	1020.2	862.4	746.3	707.6
22.5°	1069.1	974.4	792.1	664.9	624.1
25°	1036.5	925.5	718.8	586.5	544.7
27.5°	1004.9	875.6	648.6	517.2	474.5
30°	969.3	821.7	580.4	451.1	406.3
32.5°	933.7	766.7	517.2	387.9	354.3
35°	896.0	710.7	459.2	342.1	322.8
37.5°	857.3	655.7	404.2	311.6	294.3
40°	817.6	600.7	348.2	282.0	268.8
42.5°	776.9	546.8	309.5	257.6	245.4
45°	735.1	494.8	281.0	232.1	222.0
47.5°	690.3	442.9	253.5	210.8	201.6
50°	648.6	393.0	226.0	191.4	184.3
52.5°	603.8	344.1	203.6	174.1	168.0
55°	559.0	297.3	182.3	157.8	152.7
57.5°	515.2	252.5	161.9	142.5	138.5
60°	470.4	216.9	144.6	128.3	124.2
62.5°	424.6	188.4	128.3	115.1	111.0
65°	378.8	161.9	112.0	101.8	98.8
67.5°	330.9	136.4	97.7	89.6	87.6
70°	284.1	114.0	84.5	77.4	75.3
72.5°	238.3	92.7	71.3	66.2	64.1
75°	190.4	74.3	58.0	55.0	54.0
77.5°	148.7	58.0	46.8	44.8	43.8
80°	108.9	42.8	36.7	34.6	33.6
82.5°	72.3	29.5	26.5	25.5	24.4
85°	37.7	18.3	16.3	16.3	15.3
87.5°	12.2	8.1	8.1	8.1	7.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055403  
 CATALOG NUMBER: S122R3DR-H865D930-X4F0-XX-UDD-F-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	20.51	21.98	20.88	22.30	22.61	15.32	16.79	15.68	17.10	17.41
	3H	22.84	24.16	23.22	24.49	24.85	16.97	18.28	17.34	18.61	18.97
	4H	23.74	24.97	24.14	25.32	25.70	17.60	18.84	18.00	19.19	19.56
	6H	24.40	25.54	24.81	25.91	26.30	18.10	19.24	18.51	19.60	20.00
	8H	24.61	25.69	25.04	26.08	26.49	18.26	19.35	18.69	19.74	20.14
	12H	24.72	25.76	25.16	26.14	26.57	18.38	19.42	18.81	19.80	20.23
4H	2H	20.53	21.76	20.93	22.11	22.49	16.03	17.27	16.43	17.62	18.00
	3H	22.94	23.97	23.35	24.37	24.77	17.88	18.91	18.29	19.31	19.71
	4H	23.87	24.79	24.30	25.21	25.65	18.63	19.55	19.06	19.97	20.41
	6H	24.65	25.45	25.11	25.89	26.36	19.24	20.05	19.70	20.49	20.95
	8H	24.92	25.67	25.38	26.11	26.58	19.46	20.21	19.93	20.65	21.12
	12H	25.10	25.76	25.58	26.24	26.72	19.62	20.29	20.11	20.77	21.24
8H	4H	23.86	24.61	24.33	25.06	25.53	19.01	19.76	19.47	20.20	20.67
	6H	24.67	25.29	25.17	25.78	26.26	19.75	20.36	20.24	20.86	21.33
	8H	24.97	25.53	25.49	26.04	26.53	20.04	20.60	20.56	21.11	21.60
	12H	25.20	25.69	25.72	26.19	26.75	20.29	20.78	20.80	21.27	21.83
12H	4H	23.84	24.51	24.33	24.99	25.46	19.07	19.73	19.55	20.21	20.68
	6H	24.65	25.20	25.16	25.71	26.20	19.83	20.39	20.35	20.90	21.39
	8H	24.98	25.47	25.49	25.96	26.53	20.19	20.68	20.70	21.17	21.74