

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: P1055697

Luminaire Tested: S123R3DR-H1000D927-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055697  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-H1000D927-X4F0-XX-UDD-FLL-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

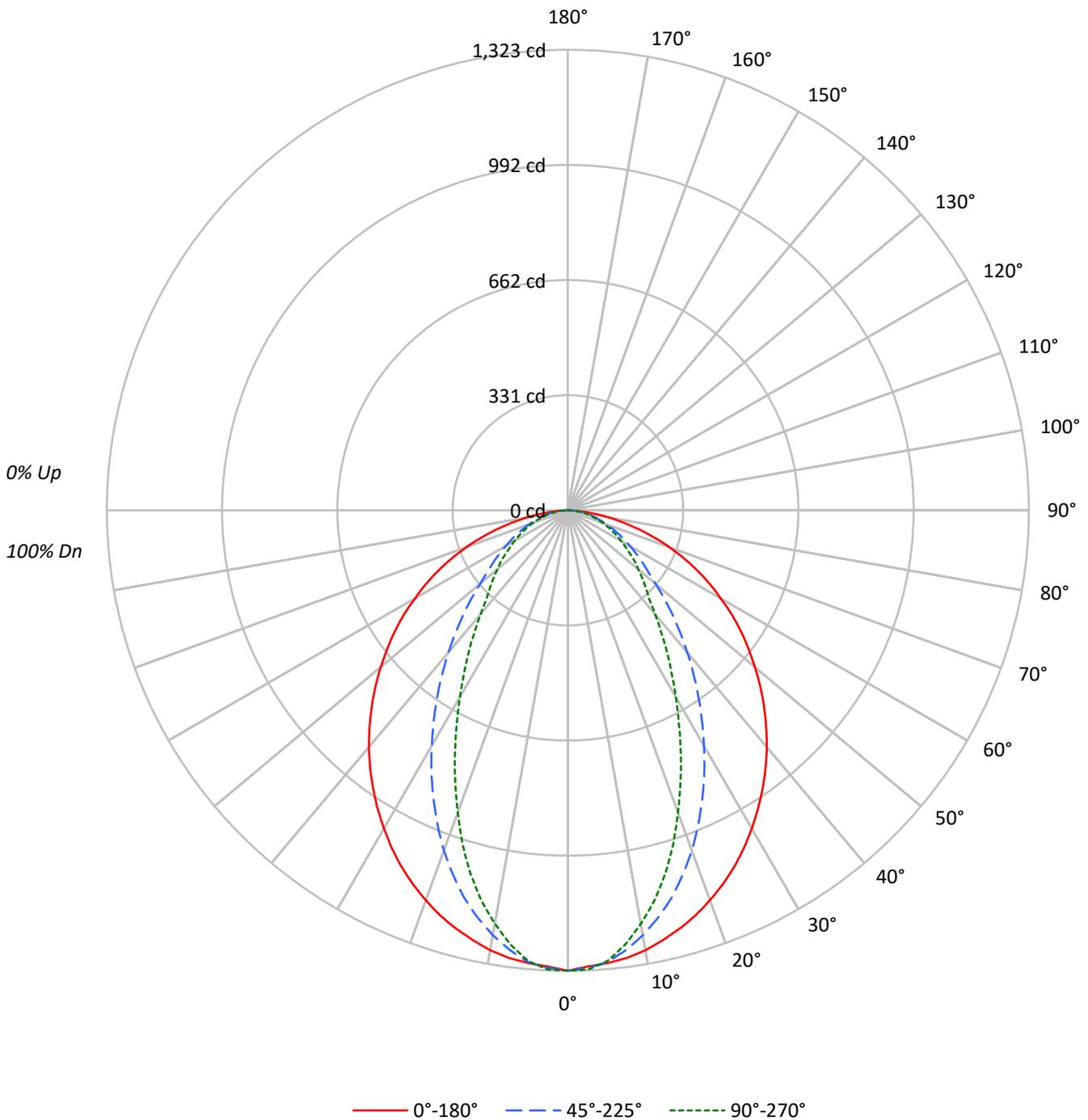
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2319.8 lumens  
Efficiency: N/A  
Efficacy: 75.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02  
Luminous Opening: Rectangular (W 0.23' 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: P1055697

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-FLL-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1055697

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-FLL-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	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

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

	0°	45°	90°
0°	15947	15947	15947
5°	15805	15768	15733
10°	15708	15176	14764
15°	15522	14374	13484
20°	15295	13341	11855
25°	15029	12147	10199
30°	14696	10867	8622
35°	14343	9609	7281
40°	13982	8392	6119
45°	13562	7236	5398
50°	13137	6161	4954
55°	12746	5490	4574
60°	12213	4962	4270
65°	11714	4544	4008
70°	10917	4184	3765
75°	9768	3871	3550
80°	8380	3569	3298
85°	5879	3278	3154

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13562 cd/sqm



TEST NUMBER: P1055697

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-FLL-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.6	5.3
10°-20°	324.4	14.0
20°-30°	427.3	18.4
30°-40°	433.7	18.7
40°-50°	377.0	16.3
50°-60°	295.4	12.7
60°-70°	200.7	8.7
70°-80°	108.7	4.7
80°-90°	29.9	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°	874.3	37.7
0°-40°	1308.1	56.4
0°-60°	1980.4	85.4
0°-90°	2319.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2319.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1323	1323	1323	1323	1323	
5°	1306	1322	1303	1291	1300	124
15°	1244	1226	1152	1095	1080	351
25°	1130	1062	913	799	767	520
35°	974	859	653	528	495	610
45°	795	638	424	328	317	614
55°	606	421	261	223	218	541
65°	411	228	159	142	140	405
75°	210	105	83	77	76	224
85°	42	26	24	22	23	54
90°	0	0	0	0	0	



TEST NUMBER: P1055697

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-FLL-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1322.7	1322.7	1322.7	1322.7	1322.7
2.5°	1311.8	1328.6	1315.8	1316.8	1320.7
5°	1305.9	1321.7	1302.9	1291.1	1300.0
7.5°	1297.0	1308.9	1274.2	1255.4	1258.4
10°	1283.1	1287.1	1239.6	1209.9	1206.0
12.5°	1264.3	1257.4	1198.1	1154.5	1147.6
15°	1243.6	1225.8	1151.6	1095.2	1080.3
17.5°	1219.8	1190.1	1097.1	1027.9	1005.1
20°	1192.1	1150.6	1039.8	951.7	924.0
22.5°	1162.4	1109.0	977.4	873.6	844.9
25°	1129.8	1061.5	913.1	799.4	766.7
27.5°	1094.2	1014.0	847.8	726.2	689.5
30°	1055.6	964.6	780.6	654.9	619.3
32.5°	1016.0	912.1	716.3	588.6	554.0
35°	974.5	858.7	652.9	528.3	494.7
37.5°	931.9	804.3	591.6	470.9	439.3
40°	888.4	748.9	533.2	417.5	388.8
42.5°	841.9	693.5	476.8	367.0	345.3
45°	795.4	638.1	424.4	327.5	316.6
47.5°	748.9	581.7	374.9	299.8	289.9
50°	700.4	527.3	328.5	274.0	264.1
52.5°	652.9	473.9	289.9	249.3	242.4
55°	606.4	421.4	261.2	222.6	217.6
57.5°	558.0	370.0	232.5	201.8	195.9
60°	506.5	320.5	205.8	180.1	177.1
62.5°	460.0	274.0	182.0	161.3	158.3
65°	410.6	227.5	159.3	142.5	140.5
67.5°	360.1	189.0	138.5	124.7	123.7
70°	309.7	159.3	118.7	107.8	106.8
72.5°	260.2	131.6	99.9	93.0	91.0
75°	209.7	104.9	83.1	77.2	76.2
77.5°	164.2	81.1	66.3	62.3	61.3
80°	120.7	60.3	51.4	48.5	47.5
82.5°	79.1	41.6	36.6	34.6	34.6
85°	42.5	25.7	23.7	21.8	22.8
87.5°	14.8	10.9	10.9	9.9	10.9
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055697  
 CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-FLL-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	20.18	21.67	20.54	21.98	22.30	15.33	16.82	15.69	17.13	17.45
	3H	22.07	23.41	22.44	23.73	24.10	16.96	18.29	17.33	18.62	18.99
	4H	22.82	24.08	23.22	24.43	24.81	17.59	18.85	17.99	19.20	19.58
	6H	23.39	24.55	23.80	24.91	25.31	18.08	19.24	18.50	19.61	20.00
	8H	23.56	24.66	23.99	25.05	25.46	18.25	19.36	18.68	19.75	20.15
	12H	23.66	24.71	24.09	25.10	25.53	18.38	19.43	18.81	19.82	20.25
4H	2H	20.23	21.48	20.63	21.83	22.21	16.06	17.31	16.46	17.66	18.04
	3H	22.24	23.29	22.65	23.69	24.09	17.88	18.92	18.29	19.32	19.72
	4H	23.06	24.00	23.49	24.42	24.86	18.62	19.56	19.06	19.98	20.42
	6H	23.74	24.56	24.20	25.00	25.46	19.23	20.05	19.69	20.49	20.95
	8H	23.97	24.74	24.44	25.18	25.65	19.45	20.21	19.91	20.66	21.12
	12H	24.13	24.81	24.61	25.29	25.76	19.62	20.30	20.10	20.78	21.25
8H	4H	23.08	23.85	23.55	24.29	24.76	19.01	19.77	19.47	20.22	20.68
	6H	23.81	24.44	24.31	24.94	25.41	19.74	20.37	20.23	20.86	21.34
	8H	24.08	24.65	24.60	25.16	25.65	20.02	20.59	20.54	21.10	21.59
	12H	24.29	24.79	24.80	25.28	25.85	20.27	20.77	20.78	21.26	21.83
12H	4H	23.07	23.75	23.55	24.23	24.70	19.06	19.74	19.54	20.22	20.69
	6H	23.80	24.36	24.31	24.87	25.36	19.82	20.38	20.33	20.89	21.38
	8H	24.10	24.60	24.61	25.10	25.66	20.17	20.66	20.68	21.16	21.72