

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: P1055636

Luminaire Tested: S123R3DR-S560D840-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055636  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S560D840-X4F0-XX-UDD-FLL-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

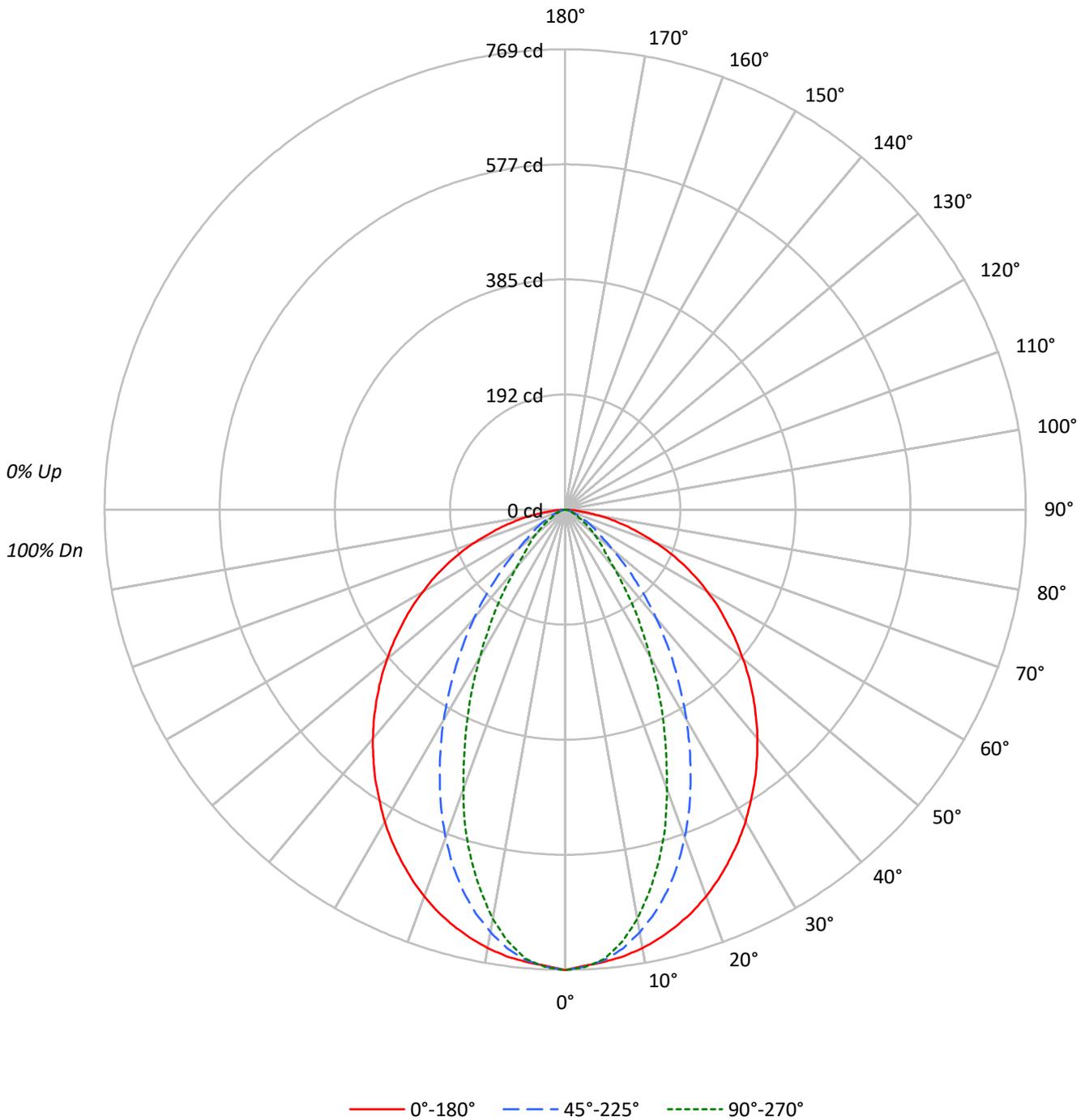
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1069.9 lumens  
Efficiency: N/A  
Efficacy: 56.0 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.1  
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: P1055636

CATALOG NUMBER: S123R3DR-S560D840-X4F0-XX-UDD-FLL-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1055636

CATALOG NUMBER: S123R3DR-S560D840-X4F0-XX-UDD-FLL-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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79				79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70				70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62				62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56				56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51				51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46				46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42				42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39				39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36				36

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

	0°	45°	90°
0°	9276	9276	9276
5°	9179	9143	9117
10°	9107	8777	8500
15°	8984	8229	7564
20°	8823	7485	6371
25°	8615	6588	5142
30°	8386	5645	3959
35°	8126	4658	2930
40°	7861	3708	1997
45°	7572	2772	1504
50°	7262	1928	1176
55°	6945	1410	858
60°	6612	1056	615
65°	6222	707	479
70°	5630	515	384
75°	4859	373	307
80°	3902	305	250
85°	2020	304	207

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7572 cd/sqm



TEST NUMBER: P1055636

CATALOG NUMBER: S123R3DR-S560D840-X4F0-XX-UDD-FLL-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.1	6.6
10°-20°	185.1	17.3
20°-30°	232.6	21.7
30°-40°	216.6	20.2
40°-50°	165.8	15.5
50°-60°	110.2	10.3
60°-70°	59.4	5.6
70°-80°	24.3	2.3
80°-90°	4.7	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°	488.8	45.7
0°-40°	705.5	65.9
0°-60°	981.5	91.7
0°-90°	1069.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1069.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	758	766	756	753	753	72
15°	720	708	659	621	606	203
25°	648	604	495	413	386	298
35°	552	470	316	224	199	345
45°	444	328	163	96	88	343
55°	330	191	67	47	41	296
65°	218	74	25	18	17	215
75°	104	18	8	7	7	112
85°	15	2	2	2	2	22
90°	0	0	0	0	0	



TEST NUMBER: P1055636

CATALOG NUMBER: S123R3DR-S560D840-X4F0-XX-UDD-FLL-S

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	769.4	769.4	769.4	769.4	769.4
2.5°	762.8	772.3	764.3	765.0	765.0
5°	758.4	766.5	755.5	752.6	753.3
7.5°	752.6	757.7	739.5	730.0	728.5
10°	743.9	745.3	716.9	700.1	694.3
12.5°	732.9	727.8	690.6	662.9	652.0
15°	719.8	708.1	659.3	620.6	606.0
17.5°	705.2	685.5	623.5	573.2	555.7
20°	687.7	660.0	583.4	520.7	496.6
22.5°	668.7	633.0	541.1	466.7	439.7
25°	647.6	603.8	495.2	412.8	386.5
27.5°	625.7	572.5	450.0	361.7	334.7
30°	602.4	540.4	405.5	312.1	284.4
32.5°	576.8	505.4	359.5	266.2	238.5
35°	552.1	470.4	316.5	223.9	199.1
37.5°	525.8	435.4	274.9	186.7	159.0
40°	499.5	399.6	235.6	150.2	126.9
42.5°	471.8	363.9	198.4	119.6	101.4
45°	444.1	328.2	162.6	95.5	88.2
47.5°	416.4	292.4	131.3	82.4	75.1
50°	387.2	258.2	102.8	70.0	62.7
52.5°	359.5	223.9	80.2	57.6	51.0
55°	330.4	191.1	67.1	46.7	40.8
57.5°	303.4	157.5	55.4	36.5	32.1
60°	274.2	127.6	43.8	28.4	25.5
62.5°	246.5	99.9	33.5	22.6	20.4
65°	218.1	73.7	24.8	18.2	16.8
67.5°	189.6	53.2	19.0	14.6	13.9
70°	159.7	40.1	14.6	11.7	10.9
72.5°	131.3	28.4	10.9	9.5	8.8
75°	104.3	17.5	8.0	7.3	6.6
77.5°	80.2	10.2	5.8	5.8	5.1
80°	56.2	5.8	4.4	4.4	3.6
82.5°	34.3	3.6	2.9	2.9	2.9
85°	14.6	2.2	2.2	2.2	1.5
87.5°	2.2	0.7	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)