

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: P1055603

Luminaire Tested: S123R3DR-S340D830-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055603  
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-S340D830-X4F0-XX-UDD-FLL-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

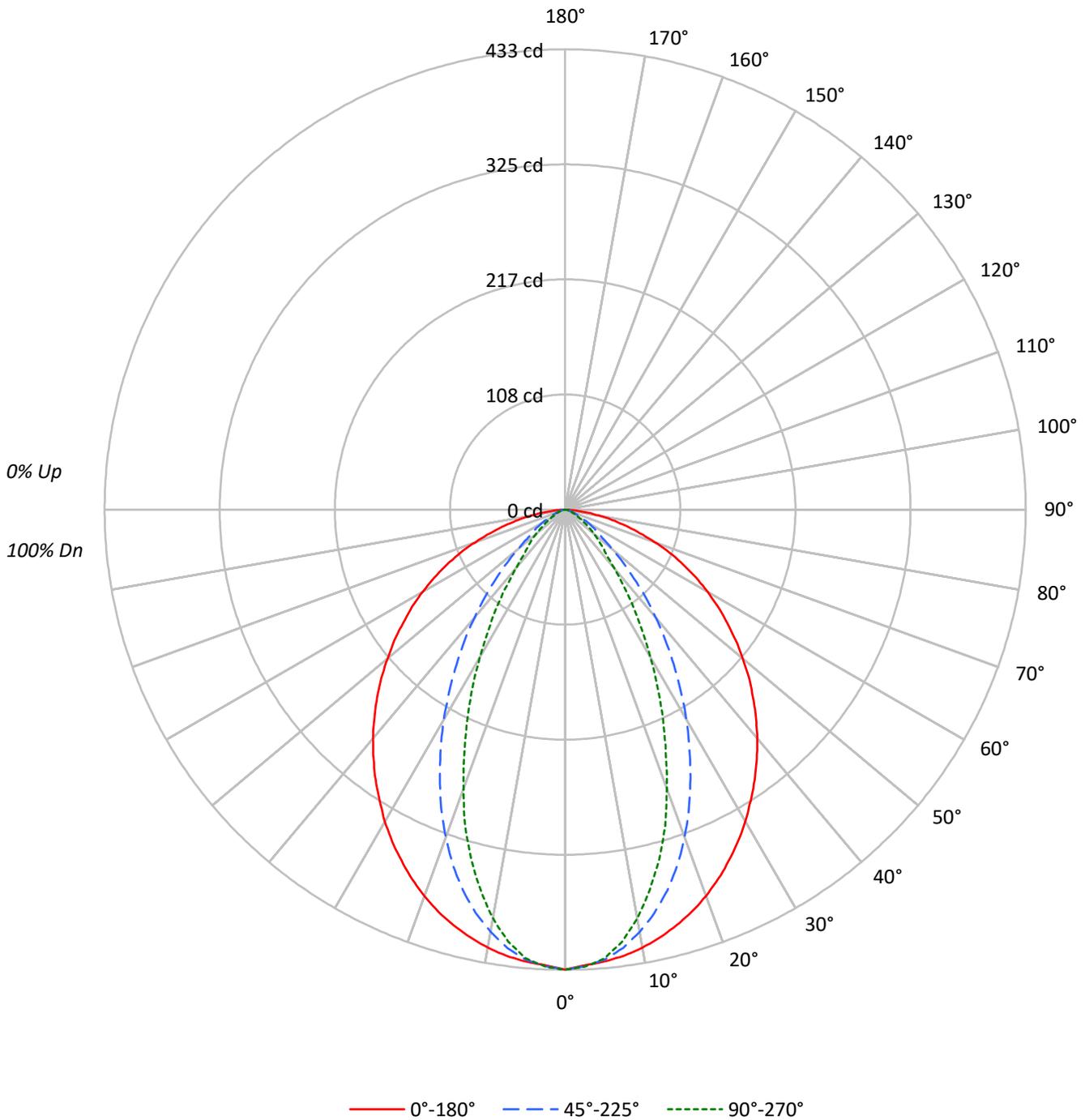
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 601.9 lumens  
Efficiency: N/A  
Efficacy: 47.8 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): 12.6  
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

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### Luminous Intensity Polar Plot





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**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°	5218	5218	5218
5°	5164	5144	5129
10°	5123	4937	4782
15°	5054	4629	4255
20°	4964	4211	3585
25°	4846	3706	2892
30°	4718	3176	2227
35°	4571	2620	1648
40°	4423	2085	1124
45°	4259	1560	846
50°	4085	1084	662
55°	3905	792	483
60°	3721	593	347
65°	3500	397	268
70°	3166	289	219
75°	2734	210	172
80°	2194	174	146
85°	1134	166	111

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4259 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.0	6.6
10°-20°	104.1	17.3
20°-30°	130.8	21.7
30°-40°	121.9	20.2
40°-50°	93.3	15.5
50°-60°	62.0	10.3
60°-70°	33.4	5.6
70°-80°	13.7	2.3
80°-90°	2.6	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°	275.0	45.7
0°-40°	396.9	65.9
0°-60°	552.2	91.7
0°-90°	601.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	601.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	433	433	433	433	433	
5°	427	431	425	423	424	40
15°	405	398	371	349	341	114
25°	364	340	279	232	217	168
35°	311	265	178	126	112	194
45°	250	185	92	54	50	193
55°	186	108	38	26	23	167
65°	123	41	14	10	9	121
75°	59	10	4	4	4	63
85°	8	1	1	1	1	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	432.8	432.8	432.8	432.8	432.8
2.5°	429.1	434.5	429.9	430.4	430.4
5°	426.7	431.2	425.0	423.4	423.8
7.5°	423.4	426.2	416.0	410.7	409.8
10°	418.5	419.3	403.3	393.8	390.6
12.5°	412.3	409.4	388.5	372.9	366.8
15°	404.9	398.4	370.9	349.1	340.9
17.5°	396.7	385.6	350.8	322.5	312.6
20°	386.9	371.3	328.2	292.9	279.4
22.5°	376.2	356.1	304.4	262.6	247.4
25°	364.3	339.7	278.6	232.2	217.4
27.5°	352.0	322.0	253.1	203.5	188.3
30°	338.9	304.0	228.1	175.6	160.0
32.5°	324.5	284.3	202.3	149.7	134.2
35°	310.6	264.6	178.0	125.9	112.0
37.5°	295.8	244.9	154.7	105.0	89.4
40°	281.0	224.8	132.5	84.5	71.4
42.5°	265.4	204.7	111.6	67.3	57.0
45°	249.8	184.6	91.5	53.7	49.6
47.5°	234.3	164.5	73.8	46.4	42.3
50°	217.8	145.2	57.8	39.4	35.3
52.5°	202.3	125.9	45.1	32.4	28.7
55°	185.8	107.5	37.7	26.3	23.0
57.5°	170.7	88.6	31.2	20.5	18.1
60°	154.3	71.8	24.6	16.0	14.4
62.5°	138.7	56.2	18.9	12.7	11.5
65°	122.7	41.4	13.9	10.3	9.4
67.5°	106.7	29.9	10.7	8.2	7.8
70°	89.8	22.6	8.2	6.6	6.2
72.5°	73.8	16.0	6.2	5.3	4.9
75°	58.7	9.8	4.5	4.1	3.7
77.5°	45.1	5.7	3.3	3.3	2.9
80°	31.6	3.3	2.5	2.5	2.1
82.5°	19.3	2.1	1.6	1.6	1.6
85°	8.2	1.2	1.2	1.2	0.8
87.5°	1.2	0.4	0.4	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)