

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: P1055609

Luminaire Tested: S123R3DR-S340D840-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

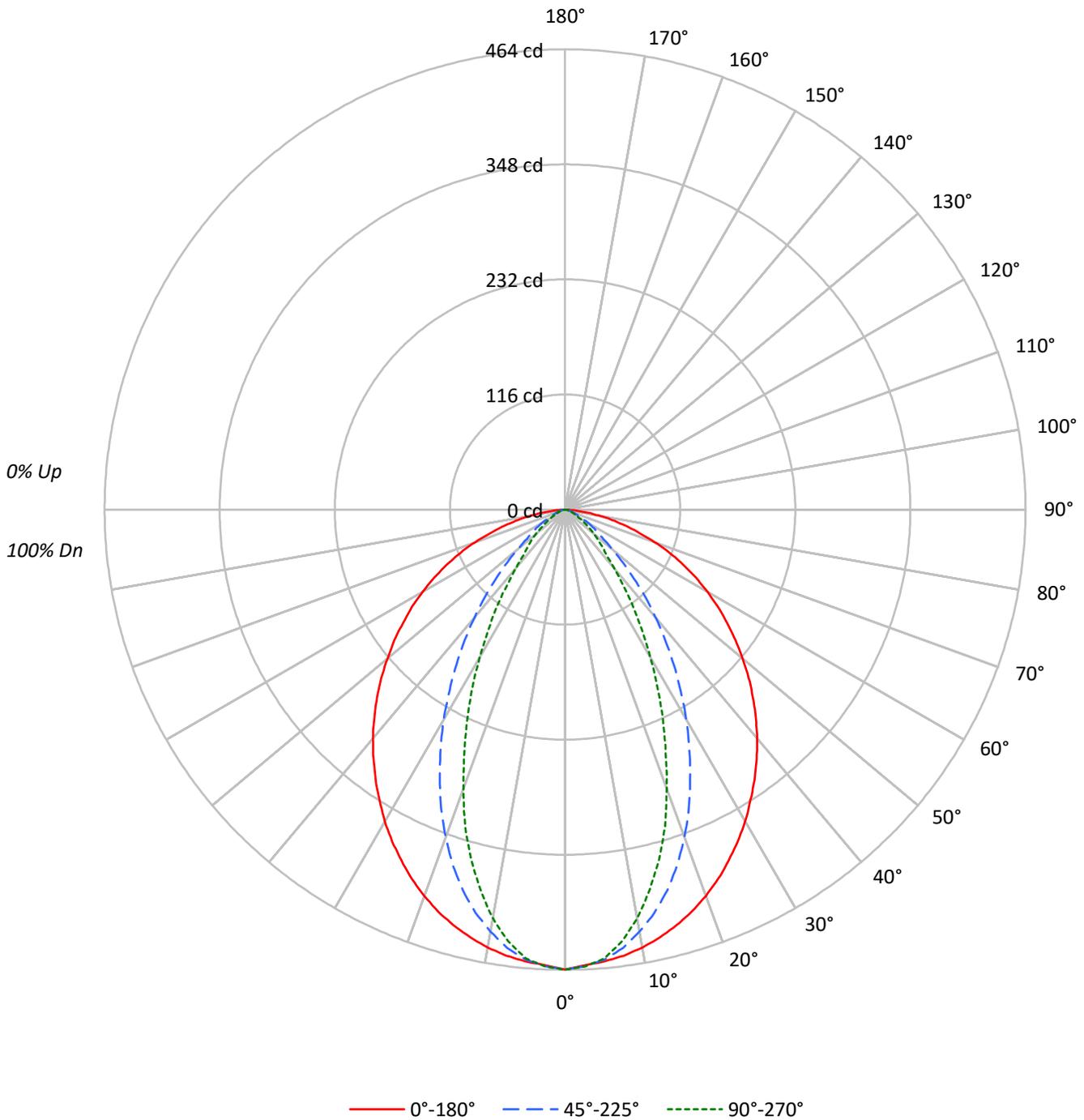
Test Method: LM-79-2019  
Report Number: P1055609  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S340D840-X4F0-XX-UDD-FLL-S  
Description: 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: 644.9 lumens  
Efficiency: N/A  
Efficacy: 51.2 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°	5591	5591	5591
5°	5532	5511	5496
10°	5488	5290	5123
15°	5415	4960	4560
20°	5318	4511	3840
25°	5192	3971	3100
30°	5055	3402	2386
35°	4897	2808	1766
40°	4739	2235	1204
45°	4564	1671	907
50°	4378	1163	709
55°	4185	849	517
60°	3986	637	371
65°	3749	425	288
70°	3395	310	233
75°	2930	224	186
80°	2347	181	153
85°	1217	180	124

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4564 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.9	6.6
10°-20°	111.6	17.3
20°-30°	140.2	21.7
30°-40°	130.6	20.2
40°-50°	100.0	15.5
50°-60°	66.4	10.3
60°-70°	35.8	5.6
70°-80°	14.7	2.3
80°-90°	2.8	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°	294.6	45.7
0°-40°	425.2	65.9
0°-60°	591.6	91.7
0°-90°	644.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	644.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	457	462	455	454	454	43
15°	434	427	397	374	365	122
25°	390	364	298	249	233	180
35°	333	284	191	135	120	208
45°	268	198	98	58	53	207
55°	199	115	40	28	25	178
65°	131	44	15	11	10	130
75°	63	10	5	4	4	67
85°	9	1	1	1	1	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	463.7	463.7	463.7	463.7	463.7
2.5°	459.8	465.5	460.7	461.1	461.1
5°	457.1	462.0	455.4	453.6	454.1
7.5°	453.6	456.7	445.7	440.0	439.1
10°	448.3	449.2	432.1	422.0	418.5
12.5°	441.7	438.7	416.3	399.6	393.0
15°	433.8	426.8	397.4	374.1	365.3
17.5°	425.0	413.2	375.8	345.5	334.9
20°	414.5	397.8	351.6	313.8	299.3
22.5°	403.1	381.5	326.1	281.3	265.0
25°	390.3	363.9	298.5	248.8	233.0
27.5°	377.1	345.0	271.2	218.0	201.8
30°	363.1	325.7	244.4	188.1	171.4
32.5°	347.7	304.6	216.7	160.4	143.7
35°	332.7	283.5	190.8	134.9	120.0
37.5°	316.9	262.4	165.7	112.5	95.8
40°	301.1	240.9	142.0	90.5	76.5
42.5°	284.4	219.3	119.6	72.1	61.1
45°	267.7	197.8	98.0	57.6	53.2
47.5°	251.0	176.3	79.1	49.7	45.3
50°	233.4	155.6	62.0	42.2	37.8
52.5°	216.7	134.9	48.4	34.7	30.8
55°	199.1	115.2	40.4	28.1	24.6
57.5°	182.9	94.9	33.4	22.0	19.3
60°	165.3	76.9	26.4	17.1	15.4
62.5°	148.6	60.2	20.2	13.6	12.3
65°	131.4	44.4	14.9	11.0	10.1
67.5°	114.3	32.1	11.4	8.8	8.4
70°	96.3	24.2	8.8	7.0	6.6
72.5°	79.1	17.1	6.6	5.7	5.3
75°	62.9	10.5	4.8	4.4	4.0
77.5°	48.4	6.2	3.5	3.5	3.1
80°	33.8	3.5	2.6	2.6	2.2
82.5°	20.7	2.2	1.8	1.8	1.8
85°	8.8	1.3	1.3	1.3	0.9
87.5°	1.3	0.4	0.4	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)