

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: P1055617

Luminaire Tested: S123R3DR-S340D930-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

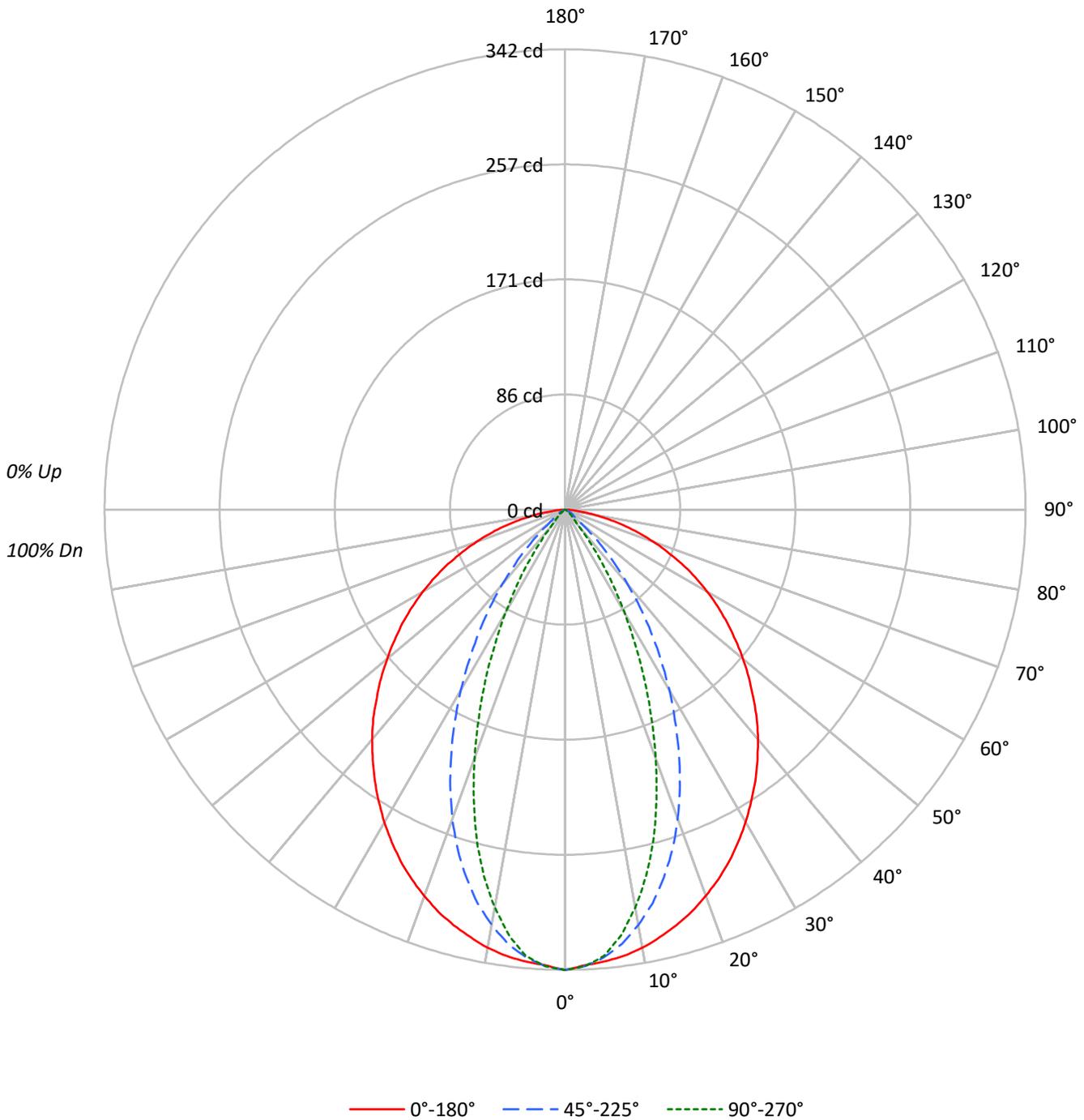
Test Method: LM-79-2019  
Report Number: P1055617  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S340D930-X4F0-XX-UDD-FLL-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 400.5 lumens  
Efficiency: N/A  
Efficacy: 31.8 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

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

	0°	45°	90°
0°	4124	4124	4124
5°	4080	4041	4029
10°	4049	3836	3675
15°	3990	3535	3167
20°	3920	3137	2522
25°	3838	2658	1860
30°	3735	2154	1221
35°	3625	1640	668
40°	3508	1133	228
45°	3371	660	133
50°	3235	259	81
55°	3096	164	38
60°	2935	104	17
65°	2733	51	11
70°	2453	25	14
75°	2082	19	19
80°	1555	28	0
85°	595	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3371 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.4	7.8
10°-20°	79.6	19.9
20°-30°	94.9	23.7
30°-40°	80.5	20.1
40°-50°	54.7	13.7
50°-60°	33.9	8.5
60°-70°	17.2	4.3
70°-80°	7.0	1.8
80°-90°	1.1	0.3
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°	205.9	51.4
0°-40°	286.4	71.5
0°-60°	375.1	93.7
0°-90°	400.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	400.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	342	342	342	342	342	
5°	337	340	334	331	333	32
15°	320	312	283	261	254	90
25°	288	262	200	154	140	133
35°	246	198	111	60	45	154
45°	198	130	39	10	8	153
55°	147	65	8	3	2	132
65°	96	16	2	0	0	95
75°	45	3	0	0	0	48
85°	4	0	0	0	0	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	342.1	342.1	342.1	342.1	342.1
2.5°	338.9	343.5	339.6	339.3	339.6
5°	337.1	340.3	333.9	331.4	332.9
7.5°	334.6	336.1	325.4	319.0	319.0
10°	330.7	329.7	313.3	302.7	300.2
12.5°	325.4	321.2	299.9	283.2	278.6
15°	319.7	311.6	283.2	260.8	253.7
17.5°	313.3	300.9	265.1	236.0	225.7
20°	305.5	288.9	244.5	209.0	196.6
22.5°	297.4	275.7	222.9	181.3	167.5
25°	288.5	261.5	199.8	154.4	139.8
27.5°	278.6	246.6	177.1	128.5	112.5
30°	268.3	231.0	154.7	103.6	87.7
32.5°	257.3	214.7	132.4	80.9	66.0
35°	246.3	197.7	111.4	60.0	45.4
37.5°	234.6	180.6	91.2	41.5	28.7
40°	222.9	163.9	72.0	26.3	14.5
42.5°	210.8	146.6	54.6	13.1	9.9
45°	197.7	129.5	38.7	9.6	7.8
47.5°	185.2	113.2	25.6	7.8	6.0
50°	172.5	96.9	13.8	5.7	4.3
52.5°	159.7	81.3	9.9	4.3	2.8
55°	147.3	65.3	7.8	2.8	1.8
57.5°	134.5	51.5	6.0	1.8	1.1
60°	121.7	38.0	4.3	1.1	0.7
62.5°	108.9	26.3	2.8	0.7	0.4
65°	95.8	16.0	1.8	0.4	0.4
67.5°	82.3	11.0	1.1	0.4	0.4
70°	69.6	7.8	0.7	0.4	0.4
72.5°	56.8	5.0	0.4	0.4	0.0
75°	44.7	2.8	0.4	0.4	0.4
77.5°	33.0	1.1	0.4	0.4	0.0
80°	22.4	0.4	0.4	0.4	0.0
82.5°	12.4	0.0	0.4	0.4	0.0
85°	4.3	0.0	0.0	0.4	0.0
87.5°	0.0	0.0	0.0	0.4	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)