

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055618

Luminaire Tested: S123R3DR-S340D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055618  
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-S340D930-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

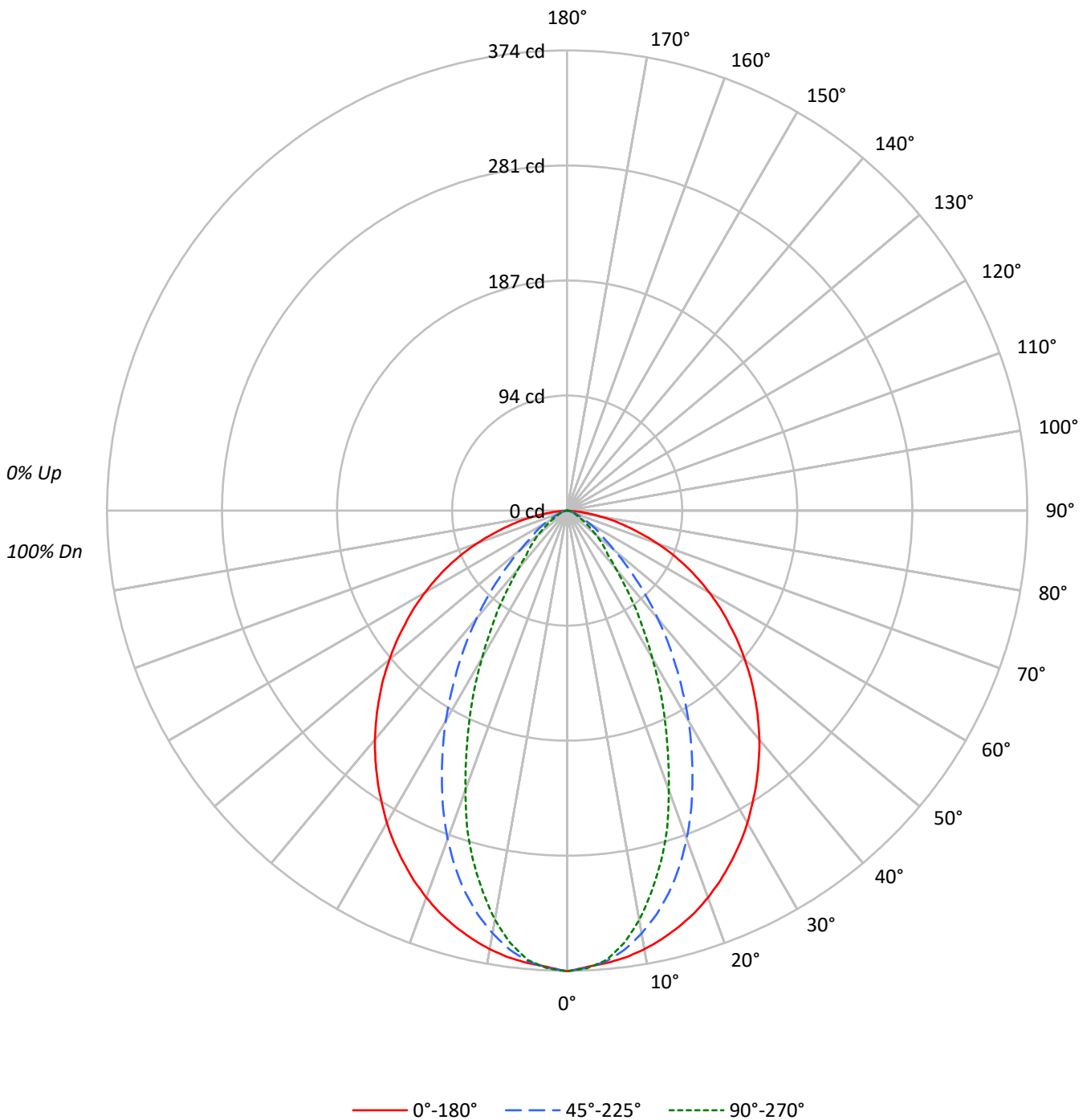
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 520.6 lumens  
Efficiency: N/A  
Efficacy: 41.3 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 (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

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

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

	0°	45°	90°
0°	4514	4514	4514
5°	4467	4449	4437
10°	4432	4270	4135
15°	4372	4004	3681
20°	4293	3642	3101
25°	4192	3206	2502
30°	4080	2747	1927
35°	3953	2267	1426
40°	3826	1804	971
45°	3685	1349	731
50°	3534	938	572
55°	3380	685	418
60°	3217	514	299
65°	3027	345	234
70°	2739	250	187
75°	2362	182	149
80°	1895	146	125
85°	982	152	97

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3685 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.6	6.6
10°-20°	90.1	17.3
20°-30°	113.2	21.7
30°-40°	105.4	20.2
40°-50°	80.7	15.5
50°-60°	53.6	10.3
60°-70°	28.9	5.6
70°-80°	11.8	2.3
80°-90°	2.3	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°	237.9	45.7
0°-40°	343.3	65.9
0°-60°	477.6	91.7
0°-90°	520.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	520.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	374	374	374	374	374	
5°	369	373	368	366	367	35
15°	350	345	321	302	295	99
25°	315	294	241	201	188	145
35°	269	229	154	109	97	168
45°	216	160	79	46	43	167
55°	161	93	33	23	20	144
65°	106	36	12	9	8	105
75°	51	8	4	4	3	54
85°	7	1	1	1	1	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	374.4	374.4	374.4	374.4	374.4
2.5°	371.2	375.8	371.9	372.3	372.3
5°	369.1	373.0	367.6	366.2	366.6
7.5°	366.2	368.7	359.8	355.2	354.5
10°	362.0	362.7	348.8	340.7	337.8
12.5°	356.6	354.2	336.1	322.6	317.2
15°	350.3	344.6	320.8	302.0	294.9
17.5°	343.2	333.6	303.4	278.9	270.4
20°	334.6	321.2	283.9	253.4	241.7
22.5°	325.4	308.0	263.3	227.1	214.0
25°	315.1	293.8	241.0	200.9	188.1
27.5°	304.5	278.6	219.0	176.0	162.9
30°	293.1	263.0	197.3	151.9	138.4
32.5°	280.7	245.9	174.9	129.5	116.0
35°	268.6	228.9	154.0	108.9	96.9
37.5°	255.9	211.9	133.8	90.8	77.4
40°	243.1	194.5	114.6	73.1	61.7
42.5°	229.6	177.1	96.5	58.2	49.3
45°	216.1	159.7	79.1	46.5	42.9
47.5°	202.6	142.3	63.9	40.1	36.6
50°	188.4	125.6	50.0	34.1	30.5
52.5°	174.9	108.9	39.0	28.0	24.8
55°	160.8	93.0	32.6	22.7	19.9
57.5°	147.6	76.7	27.0	17.7	15.6
60°	133.4	62.1	21.3	13.8	12.4
62.5°	119.9	48.6	16.3	11.0	9.9
65°	106.1	35.8	12.1	8.9	8.2
67.5°	92.3	25.9	9.2	7.1	6.7
70°	77.7	19.5	7.1	5.7	5.3
72.5°	63.9	13.8	5.3	4.6	4.3
75°	50.7	8.5	3.9	3.5	3.2
77.5°	39.0	5.0	2.8	2.8	2.5
80°	27.3	2.8	2.1	2.1	1.8
82.5°	16.7	1.8	1.4	1.4	1.4
85°	7.1	1.1	1.1	1.1	0.7
87.5°	1.1	0.4	0.4	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0



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**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	15.05	16.41	15.42	16.72	17.04	3.61	4.96	3.97	5.28	5.59
	3H	16.80	18.01	17.18	18.34	18.70	4.27	5.48	4.65	5.81	6.17
	4H	17.50	18.63	17.91	18.98	19.36	4.47	5.59	4.87	5.94	6.33
	6H	18.01	19.05	18.43	19.42	19.81	4.59	5.62	5.01	5.99	6.39
	8H	18.16	19.13	18.58	19.53	19.93	4.63	5.60	5.05	6.00	6.40
	12H	18.21	19.14	18.64	19.53	19.96	4.63	5.57	5.07	5.95	6.38
4H	2H	14.86	15.98	15.26	16.33	16.72	4.17	5.29	4.57	5.64	6.03
	3H	16.65	17.57	17.06	17.98	18.38	4.97	5.89	5.38	6.29	6.70
	4H	17.34	18.17	17.78	18.59	19.03	5.22	6.05	5.66	6.47	6.91
	6H	17.91	18.62	18.38	19.07	19.54	5.42	6.13	5.88	6.58	7.04
	8H	18.09	18.75	18.56	19.20	19.67	5.47	6.14	5.94	6.58	7.05
	12H	18.18	18.76	18.66	19.24	19.72	5.51	6.09	5.99	6.57	7.05
8H	4H	17.22	17.88	17.69	18.33	18.80	5.54	6.20	6.00	6.65	7.12
	6H	17.77	18.32	18.28	18.81	19.29	5.78	6.32	6.28	6.82	7.30
	8H	17.95	18.44	18.47	18.95	19.44	5.87	6.35	6.39	6.87	7.36
	12H	18.06	18.48	18.57	18.98	19.55	5.95	6.38	6.46	6.87	7.44
12H	4H	17.18	17.76	17.66	18.25	18.72	5.58	6.17	6.07	6.65	7.12
	6H	17.72	18.20	18.24	18.72	19.21	5.83	6.31	6.35	6.83	7.32
	8H	17.91	18.34	18.43	18.83	19.40	5.95	6.38	6.47	6.87	7.44