

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: P1055615

Luminaire Tested: S123R3DR-S340D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055615  
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-S340D927-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

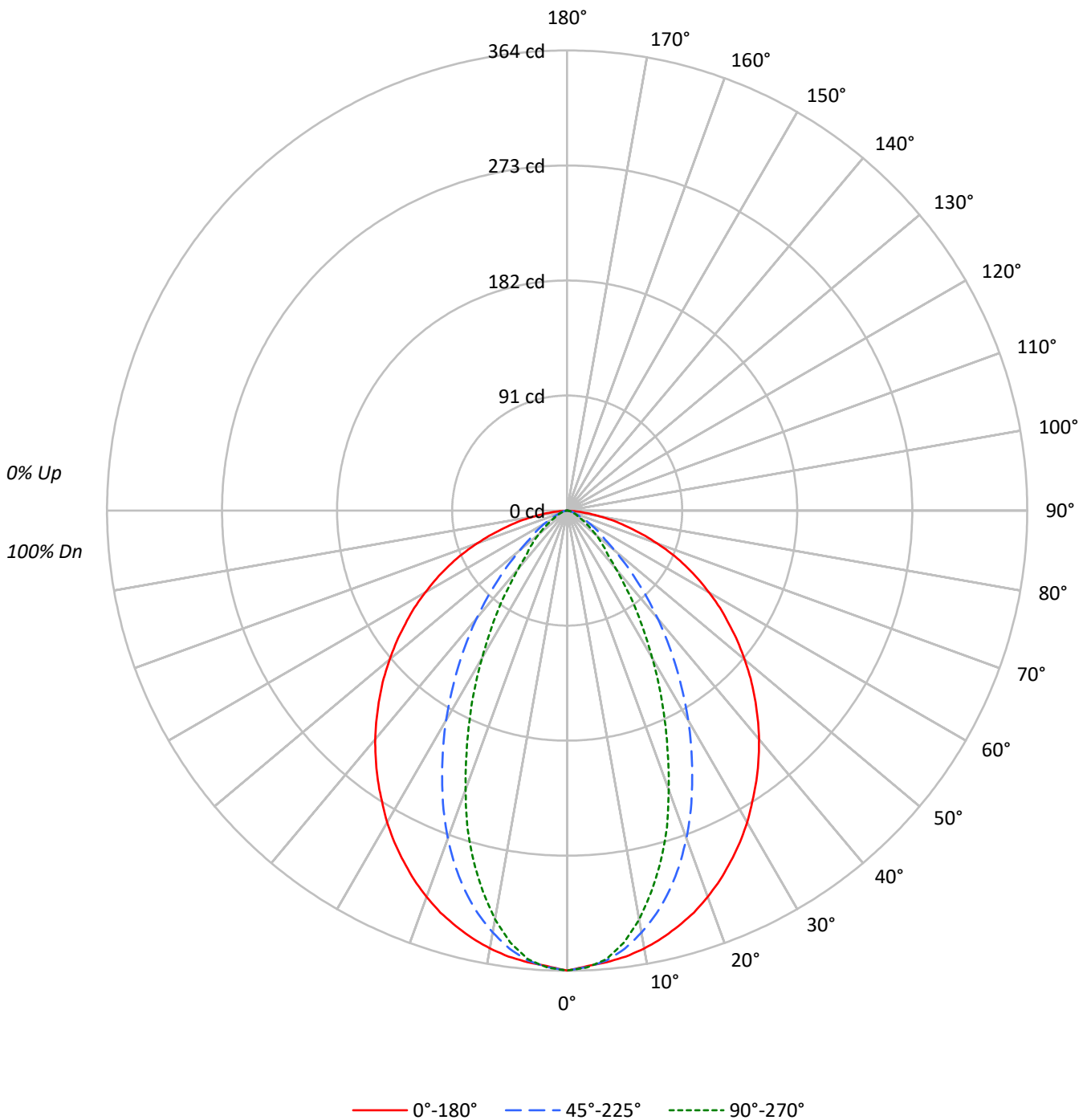
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 505.9 lumens  
Efficiency: N/A  
Efficacy: 40.1 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	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°	4386	4386	4386
5°	4340	4323	4311
10°	4306	4149	4019
15°	4248	3891	3576
20°	4171	3539	3013
25°	4073	3114	2430
30°	3965	2669	1872
35°	3841	2202	1385
40°	3717	1753	944
45°	3581	1311	711
50°	3434	912	557
55°	3283	666	406
60°	3125	499	292
65°	2941	334	225
70°	2661	243	183
75°	2297	177	144
80°	1840	146	118
85°	954	138	97

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3581 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.6	6.6
10°-20°	87.5	17.3
20°-30°	110.0	21.7
30°-40°	102.4	20.2
40°-50°	78.4	15.5
50°-60°	52.1	10.3
60°-70°	28.1	5.6
70°-80°	11.5	2.3
80°-90°	2.2	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°	231.1	45.7
0°-40°	333.6	65.9
0°-60°	464.1	91.7
0°-90°	505.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	505.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	359	362	357	356	356	34
15°	340	335	312	293	286	96
25°	306	286	234	195	183	141
35°	261	222	150	106	94	163
45°	210	155	77	45	42	162
55°	156	90	32	22	19	140
65°	103	35	12	9	8	102
75°	49	8	4	3	3	53
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°	363.8	363.8	363.8	363.8	363.8
2.5°	360.7	365.1	361.4	361.7	361.7
5°	358.6	362.4	357.2	355.8	356.2
7.5°	355.8	358.3	349.6	345.1	344.5
10°	351.7	352.4	338.9	331.0	328.3
12.5°	346.5	344.1	326.5	313.4	308.3
15°	340.3	334.8	311.7	293.4	286.5
17.5°	333.4	324.1	294.8	271.0	262.7
20°	325.1	312.0	275.8	246.2	234.8
22.5°	316.2	299.3	255.8	220.7	207.9
25°	306.2	285.5	234.1	195.2	182.7
27.5°	295.8	270.7	212.7	171.0	158.3
30°	284.8	255.5	191.7	147.6	134.5
32.5°	272.7	238.9	170.0	125.9	112.8
35°	261.0	222.4	149.6	105.9	94.1
37.5°	248.6	205.8	130.0	88.3	75.2
40°	236.2	189.0	111.4	71.0	60.0
42.5°	223.1	172.1	93.8	56.5	47.9
45°	210.0	155.2	76.9	45.2	41.7
47.5°	196.9	138.3	62.1	39.0	35.5
50°	183.1	122.1	48.6	33.1	29.7
52.5°	170.0	105.9	37.9	27.2	24.1
55°	156.2	90.3	31.7	22.1	19.3
57.5°	143.4	74.5	26.2	17.2	15.2
60°	129.6	60.3	20.7	13.4	12.1
62.5°	116.5	47.2	15.9	10.7	9.7
65°	103.1	34.8	11.7	8.6	7.9
67.5°	89.6	25.2	9.0	6.9	6.6
70°	75.5	19.0	6.9	5.5	5.2
72.5°	62.1	13.4	5.2	4.5	4.1
75°	49.3	8.3	3.8	3.4	3.1
77.5°	37.9	4.8	2.8	2.8	2.4
80°	26.5	2.8	2.1	2.1	1.7
82.5°	16.2	1.7	1.4	1.4	1.4
85°	6.9	1.0	1.0	1.0	0.7
87.5°	1.0	0.3	0.3	0.3	0.3
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	14.95	16.31	15.31	16.62	16.93	3.51	4.87	3.88	5.18	5.50
	3H	16.70	17.91	17.08	18.24	18.60	4.18	5.39	4.56	5.72	6.08
	4H	17.40	18.53	17.81	18.88	19.26	4.37	5.50	4.78	5.85	6.23
	6H	17.91	18.95	18.33	19.32	19.71	4.50	5.53	4.91	5.90	6.29
	8H	18.05	19.03	18.48	19.42	19.83	4.53	5.51	4.96	5.90	6.31
	12H	18.11	19.04	18.54	19.42	19.85	4.54	5.48	4.98	5.86	6.29
4H	2H	14.76	15.88	15.16	16.23	16.61	4.07	5.19	4.47	5.54	5.92
	3H	16.55	17.47	16.96	17.87	18.28	4.87	5.79	5.29	6.20	6.60
	4H	17.25	18.07	17.68	18.49	18.93	5.13	5.95	5.56	6.37	6.81
	6H	17.81	18.52	18.28	18.97	19.44	5.33	6.04	5.79	6.48	6.95
	8H	17.99	18.65	18.46	19.10	19.57	5.38	6.05	5.85	6.49	6.96
	12H	18.07	18.66	18.56	19.14	19.62	5.42	6.00	5.90	6.48	6.96
8H	4H	17.12	17.78	17.59	18.23	18.70	5.44	6.11	5.91	6.55	7.02
	6H	17.68	18.22	18.18	18.71	19.19	5.70	6.24	6.20	6.73	7.21
	8H	17.85	18.34	18.37	18.85	19.34	5.79	6.27	6.31	6.79	7.28
	12H	17.96	18.38	18.47	18.88	19.45	5.87	6.30	6.38	6.79	7.36
12H	4H	17.08	17.67	17.56	18.15	18.62	5.49	6.08	5.97	6.56	7.03
	6H	17.62	18.10	18.14	18.62	19.11	5.74	6.23	6.26	6.74	7.24
	8H	17.81	18.24	18.33	18.73	19.30	5.87	6.30	6.39	6.80	7.37