

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: P1055750

Luminaire Tested: S123R3DR-H340D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055750  
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-H340D927-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

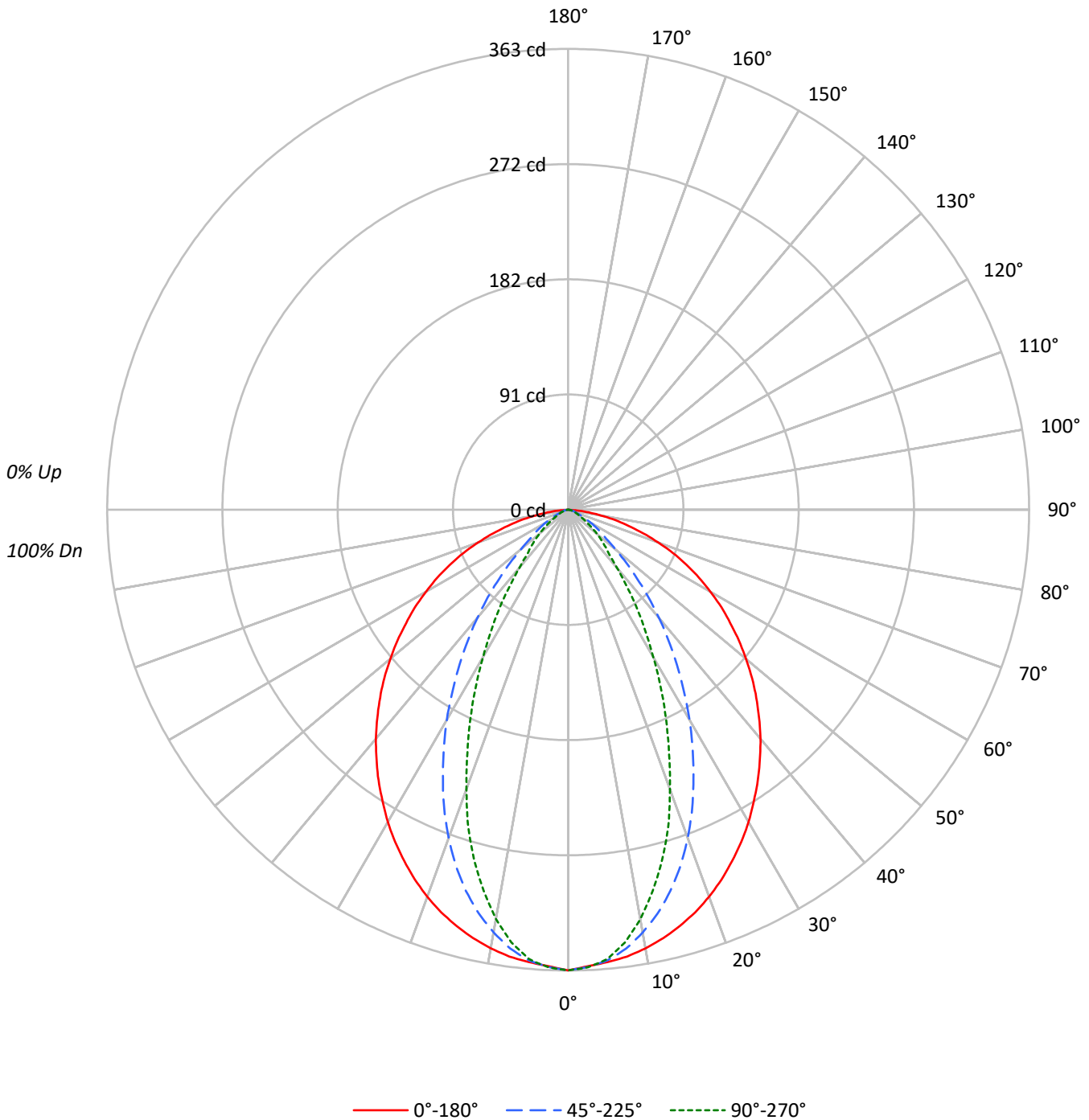
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 504.6 lumens  
Efficiency: N/A  
Efficacy: 43.1 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): 11.7  
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	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°	4375	4375	4375
5°	4329	4312	4300
10°	4295	4139	4008
15°	4238	3881	3567
20°	4162	3531	3005
25°	4063	3106	2425
30°	3955	2662	1867
35°	3833	2197	1382
40°	3708	1749	941
45°	3572	1308	709
50°	3425	910	555
55°	3275	664	406
60°	3118	497	289
65°	2933	334	225
70°	2654	243	183
75°	2292	177	144
80°	1840	146	118
85°	954	138	97

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3572 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.5	6.6
10°-20°	87.3	17.3
20°-30°	109.7	21.7
30°-40°	102.2	20.2
40°-50°	78.2	15.5
50°-60°	52.0	10.3
60°-70°	28.0	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°	230.6	45.7
0°-40°	332.7	65.9
0°-60°	462.9	91.7
0°-90°	504.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	504.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	363	363	363	363	363	
5°	358	362	356	355	355	34
15°	340	334	311	293	286	96
25°	305	285	234	195	182	141
35°	260	222	149	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°	362.9	362.9	362.9	362.9	362.9
2.5°	359.8	364.3	360.5	360.8	360.8
5°	357.7	361.5	356.3	355.0	355.3
7.5°	355.0	357.4	348.8	344.3	343.6
10°	350.8	351.5	338.1	330.2	327.4
12.5°	345.7	343.3	325.7	312.7	307.5
15°	339.5	334.0	310.9	292.7	285.8
17.5°	332.6	323.3	294.1	270.4	262.1
20°	324.4	311.3	275.2	245.6	234.2
22.5°	315.4	298.6	255.2	220.1	207.4
25°	305.4	284.8	233.5	194.7	182.3
27.5°	295.1	270.0	212.2	170.6	157.9
30°	284.1	254.9	191.2	147.2	134.1
32.5°	272.1	238.4	169.6	125.5	112.5
35°	260.4	221.9	149.3	105.6	93.9
37.5°	248.0	205.3	129.7	88.1	75.0
40°	235.6	188.5	111.1	70.9	59.8
42.5°	222.5	171.6	93.6	56.4	47.8
45°	209.5	154.8	76.7	45.1	41.6
47.5°	196.4	137.9	61.9	38.9	35.4
50°	182.6	121.8	48.5	33.0	29.6
52.5°	169.6	105.6	37.8	27.2	24.1
55°	155.8	90.1	31.6	22.0	19.3
57.5°	143.1	74.3	26.1	17.2	15.1
60°	129.3	60.2	20.6	13.4	12.0
62.5°	116.3	47.1	15.8	10.7	9.6
65°	102.8	34.7	11.7	8.6	7.9
67.5°	89.4	25.1	8.9	6.9	6.5
70°	75.3	18.9	6.9	5.5	5.2
72.5°	61.9	13.4	5.2	4.5	4.1
75°	49.2	8.3	3.8	3.4	3.1
77.5°	37.8	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	14.94	16.30	15.31	16.61	16.93	3.51	4.87	3.88	5.18	5.50
	3H	16.69	17.90	17.07	18.23	18.59	4.18	5.38	4.56	5.71	6.08
	4H	17.39	18.52	17.80	18.87	19.25	4.37	5.50	4.77	5.85	6.23
	6H	17.91	18.94	18.32	19.31	19.70	4.49	5.53	4.91	5.90	6.29
	8H	18.05	19.03	18.48	19.42	19.82	4.53	5.51	4.96	5.90	6.30
	12H	18.10	19.03	18.53	19.42	19.85	4.54	5.48	4.97	5.86	6.29
4H	2H	14.75	15.87	15.15	16.22	16.61	4.07	5.19	4.47	5.54	5.93
	3H	16.54	17.46	16.95	17.86	18.27	4.87	5.79	5.28	6.19	6.60
	4H	17.24	18.06	17.67	18.48	18.92	5.13	5.95	5.56	6.37	6.81
	6H	17.81	18.52	18.27	18.96	19.43	5.33	6.04	5.79	6.48	6.95
	8H	17.98	18.64	18.45	19.09	19.56	5.38	6.05	5.85	6.49	6.96
	12H	18.07	18.65	18.55	19.14	19.61	5.42	6.00	5.90	6.48	6.96
8H	4H	17.11	17.78	17.58	18.22	18.69	5.44	6.11	5.91	6.55	7.02
	6H	17.67	18.21	18.17	18.70	19.19	5.70	6.24	6.20	6.73	7.21
	8H	17.84	18.33	18.36	18.84	19.34	5.79	6.27	6.31	6.79	7.28
	12H	17.95	18.38	18.46	18.87	19.44	5.87	6.30	6.38	6.79	7.36
12H	4H	17.07	17.66	17.56	18.14	18.61	5.49	6.07	5.97	6.56	7.03
	6H	17.61	18.09	18.13	18.61	19.10	5.74	6.23	6.26	6.74	7.24
	8H	17.80	18.23	18.32	18.73	19.30	5.87	6.30	6.39	6.80	7.37