

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: P1059192

Luminaire Tested: S123RDRP-S340D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059192  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S340D840-X4F0-XX-UDD-WVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

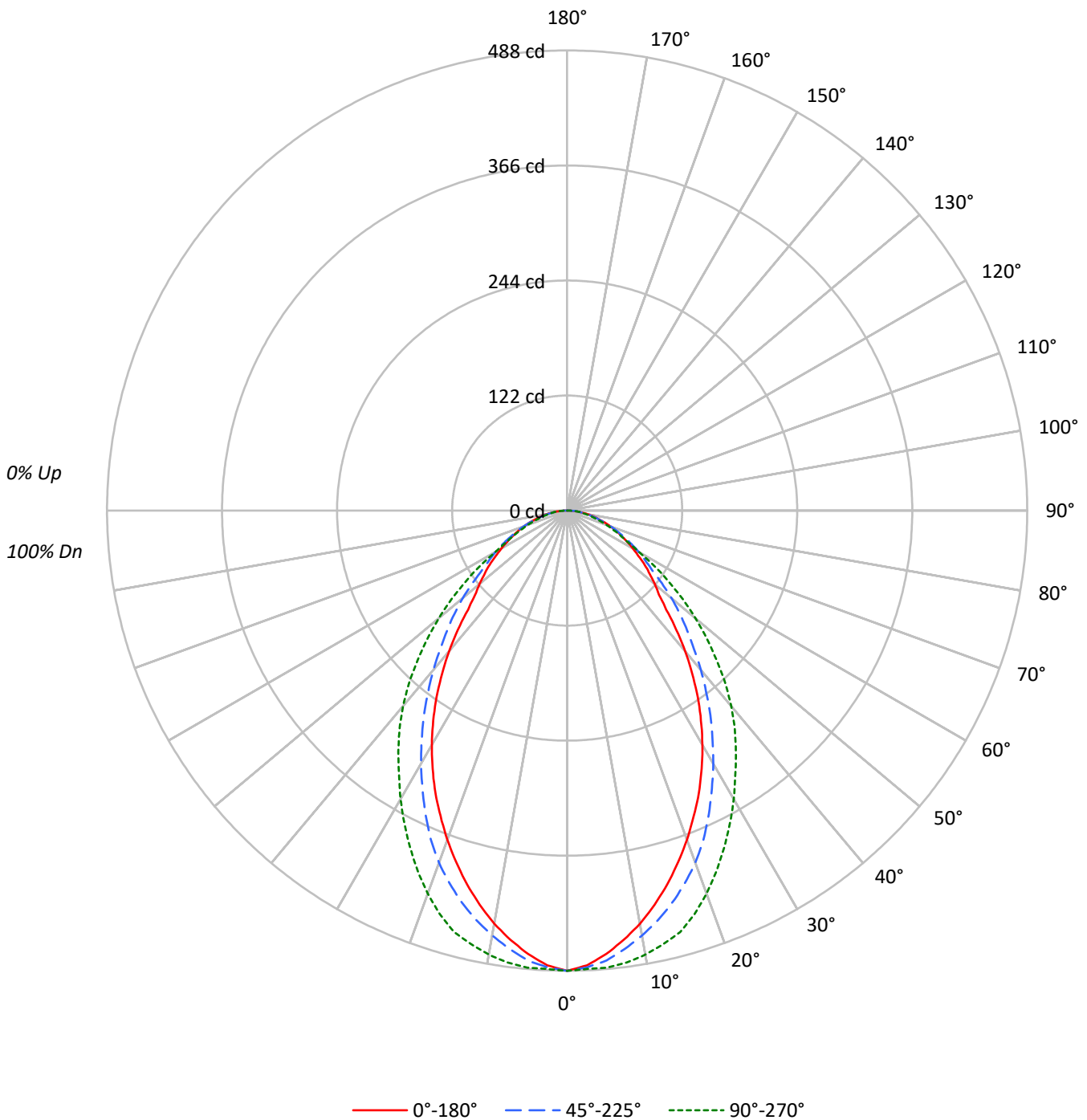
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 857.8 lumens  
Efficiency: N/A  
Efficacy: 68.6 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.5  
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51					51			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46					46			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41					41			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38					38			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34					34			
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32					32			

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

	0°	45°	90°
0°	5731	5731	5731
5°	5566	5645	5735
10°	5305	5455	5701
15°	4989	5235	5627
20°	4641	4966	5402
25°	4283	4605	5105
30°	3890	4203	4790
35°	3462	3794	4474
40°	2988	3380	4146
45°	2469	2992	3718
50°	2218	2640	3246
55°	2055	2254	2692
60°	1895	2053	2062
65°	1762	1856	1728
70°	1658	1689	1514
75°	1561	1506	1334
80°	1474	1366	1251
85°	1415	1522	1415

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3718 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.2	5.3
10°-20°	121.8	14.2
20°-30°	164.8	19.2
30°-40°	169.3	19.7
40°-50°	142.2	16.6
50°-60°	102.0	11.9
60°-70°	64.9	7.6
70°-80°	35.7	4.2
80°-90°	11.9	1.4
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°	331.8	38.7
0°-40°	501.1	58.4
0°-60°	745.3	86.9
0°-90°	857.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	857.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	488	488	488	488	488	
5°	472	481	479	482	486	44
15°	410	422	431	449	463	115
25°	331	343	355	375	394	152
35°	242	255	265	288	312	150
45°	149	162	180	206	224	117
55°	100	102	110	125	132	90
65°	63	67	67	63	62	63
75°	34	38	33	31	29	37
85°	10	11	11	12	10	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	488.1	488.1	488.1	488.1	488.1
2.5°	482.7	489.4	484.8	485.2	486.5
5°	472.2	480.6	478.9	482.3	486.5
7.5°	459.2	468.4	468.8	476.8	483.5
10°	444.9	454.5	457.5	469.7	478.1
12.5°	428.1	438.6	444.9	460.0	470.9
15°	410.4	421.8	430.6	449.1	462.9
17.5°	391.1	403.3	414.6	434.4	448.7
20°	371.4	384.4	397.4	415.9	432.3
22.5°	350.8	364.2	377.7	395.7	413.8
25°	330.6	343.2	355.4	374.7	394.0
27.5°	308.8	321.8	332.3	353.7	373.9
30°	286.9	299.9	310.0	332.3	353.3
32.5°	264.2	277.7	286.9	310.0	331.9
35°	241.5	254.6	264.7	288.2	312.1
37.5°	217.6	231.9	242.0	268.4	292.0
40°	194.9	208.4	220.5	248.3	270.5
42.5°	171.4	185.3	199.1	227.7	248.3
45°	148.7	161.7	180.2	206.3	223.9
47.5°	132.3	140.7	162.2	184.0	200.8
50°	121.4	124.8	144.5	163.8	177.7
52.5°	110.5	113.0	126.4	144.1	154.6
55°	100.4	102.5	110.1	124.8	131.5
57.5°	89.5	91.6	97.9	106.3	110.1
60°	80.7	82.3	87.4	88.6	87.8
62.5°	71.8	74.4	76.9	73.9	72.7
65°	63.4	67.2	66.8	63.0	62.2
67.5°	55.9	59.7	57.6	53.8	52.5
70°	48.3	52.1	49.2	45.4	44.1
72.5°	41.2	45.4	40.7	37.4	36.5
75°	34.4	37.8	33.2	30.7	29.4
77.5°	28.1	30.7	26.5	24.4	23.5
80°	21.8	23.5	20.2	18.9	18.5
82.5°	16.0	16.8	14.7	15.5	15.1
85°	10.5	10.9	11.3	11.8	10.5
87.5°	5.0	7.1	7.1	6.7	5.5
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	13.25	14.72	13.62	15.03	15.34	14.32	15.78	14.69	16.10	16.41
	3H	14.95	16.26	15.33	16.59	16.95	15.41	16.72	15.79	17.05	17.41
	4H	15.60	16.83	16.00	17.18	17.56	15.81	17.04	16.21	17.38	17.76
	6H	16.11	17.24	16.52	17.61	18.00	16.12	17.25	16.53	17.62	18.01
	8H	16.28	17.36	16.71	17.75	18.15	16.25	17.33	16.68	17.72	18.12
	12H	16.40	17.44	16.83	17.82	18.25	16.37	17.40	16.80	17.79	18.22
4H	2H	13.85	15.08	14.25	15.43	15.81	14.73	15.95	15.13	16.30	16.68
	3H	15.78	16.80	16.19	17.20	17.60	16.04	17.06	16.45	17.46	17.86
	4H	16.59	17.51	17.03	17.93	18.37	16.56	17.48	17.00	17.90	18.34
	6H	17.24	18.04	17.70	18.48	18.94	17.00	17.79	17.45	18.24	18.70
	8H	17.46	18.21	17.93	18.65	19.12	17.18	17.93	17.65	18.37	18.84
	12H	17.63	18.30	18.12	18.78	19.25	17.37	18.03	17.85	18.51	18.98
8H	4H	16.83	17.58	17.30	18.02	18.49	16.81	17.55	17.27	18.00	18.47
	6H	17.62	18.23	18.12	18.72	19.20	17.36	17.97	17.85	18.46	18.94
	8H	17.93	18.48	18.45	18.99	19.48	17.63	18.18	18.15	18.70	19.18
	12H	18.20	18.69	18.71	19.18	19.75	17.92	18.41	18.44	18.91	19.47
12H	4H	16.84	17.51	17.33	17.99	18.46	16.84	17.50	17.32	17.98	18.45
	6H	17.65	18.20	18.17	18.72	19.20	17.41	17.96	17.92	18.47	18.96
	8H	18.03	18.52	18.54	19.01	19.57	17.75	18.24	18.26	18.73	19.30