

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: P1059191

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059191  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67 )  
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-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

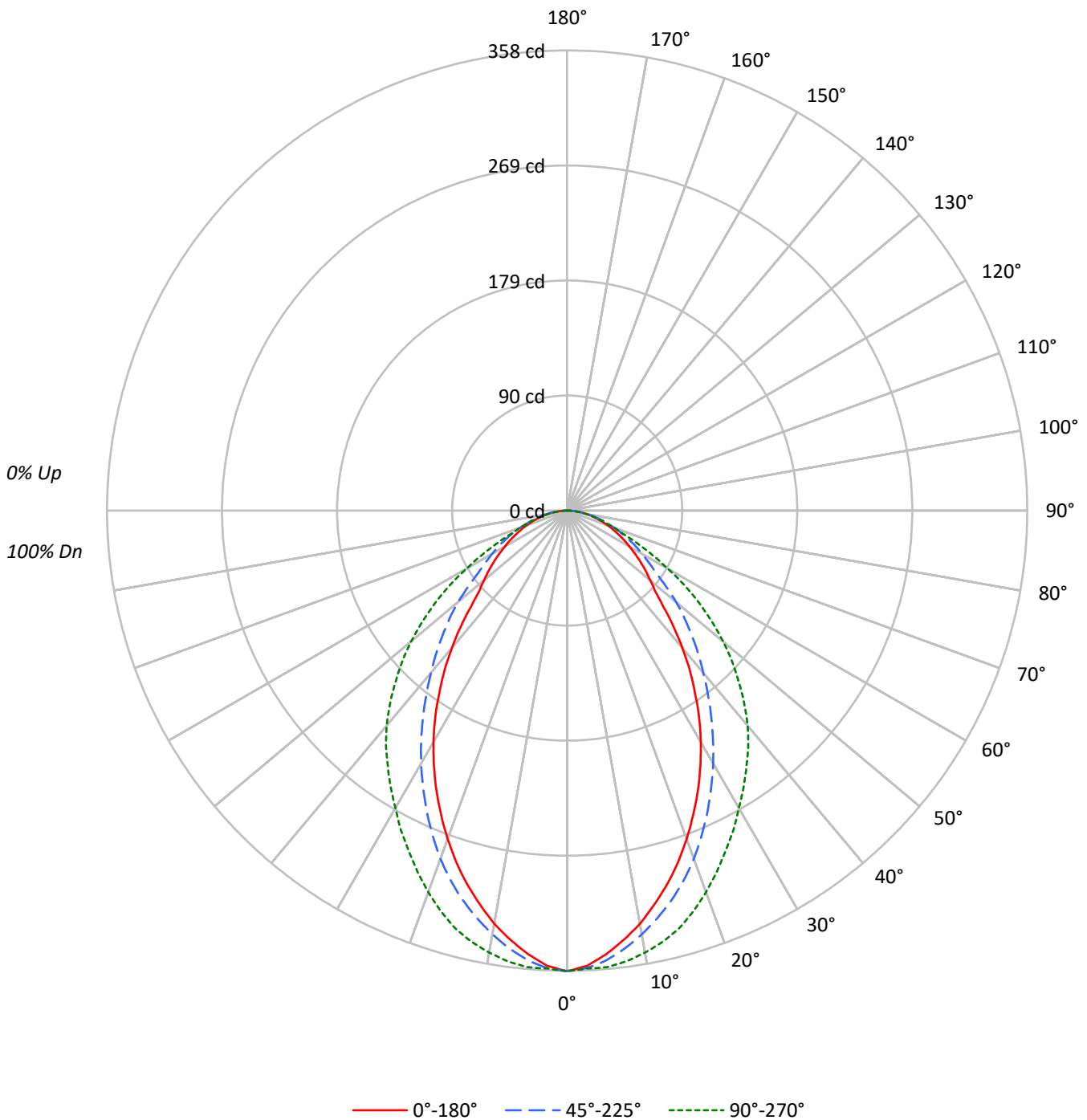
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 647.2 lumens  
Efficiency: N/A  
Efficacy: 51.8 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
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 (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	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	100	97	100	97	94	96	93	91	92	90	89					87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67					65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59					57				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53					51				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43					41				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39					37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35					34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33					31				

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

	0°	45°	90°
0°	4207	4207	4207
5°	4084	4140	4203
10°	3892	3992	4163
15°	3657	3815	4091
20°	3396	3601	3947
25°	3119	3347	3782
30°	2819	3081	3623
35°	2487	2800	3486
40°	2138	2525	3348
45°	1759	2273	3139
50°	1542	2026	2894
55°	1427	1728	2563
60°	1313	1588	2121
65°	1225	1459	1670
70°	1154	1325	1325
75°	1084	1220	1143
80°	1021	1109	967
85°	957	1078	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3139 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.1	5.1
10°-20°	88.8	13.7
20°-30°	120.4	18.6
30°-40°	125.9	19.5
40°-50°	109.2	16.9
50°-60°	81.2	12.6
60°-70°	52.1	8.1
70°-80°	27.9	4.3
80°-90°	8.4	1.3
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°	242.4	37.4
0°-40°	368.3	56.9
0°-60°	558.7	86.3
0°-90°	647.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	647.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	358	358	358	358	358	
5°	346	352	351	354	357	32
15°	301	308	314	326	336	84
25°	241	248	258	276	292	110
35°	174	182	195	220	243	108
45°	106	114	137	166	189	83
55°	70	71	84	108	125	62
65°	44	48	52	56	60	44
75°	24	28	27	26	25	25
85°	7	9	8	7	6	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	358.3	358.3	358.3	358.3	358.3
2.5°	354.5	359.6	356.2	356.2	356.6
5°	346.5	352.4	351.2	353.7	356.6
7.5°	336.9	343.2	343.6	349.5	353.7
10°	326.4	332.7	334.8	343.2	349.1
12.5°	313.8	320.9	324.7	335.2	343.6
15°	300.8	307.9	313.8	326.4	336.5
17.5°	286.9	294.0	301.6	315.9	326.8
20°	271.8	279.3	288.2	302.4	315.9
22.5°	256.2	264.2	273.5	289.0	304.1
25°	240.7	248.3	258.3	275.6	291.9
27.5°	224.3	232.3	242.8	261.7	280.2
30°	207.9	215.9	227.2	247.4	267.2
32.5°	191.1	199.1	211.3	234.0	255.4
35°	173.5	181.9	195.3	220.1	243.2
37.5°	156.7	164.7	179.8	207.1	231.5
40°	139.5	147.9	164.7	194.1	218.4
42.5°	122.7	131.1	150.8	180.2	204.1
45°	105.9	113.8	136.9	166.3	189.0
47.5°	92.8	98.7	123.9	151.6	174.3
50°	84.4	86.5	110.9	137.4	158.4
52.5°	76.9	78.6	96.6	123.1	142.0
55°	69.7	71.4	84.4	108.4	125.2
57.5°	62.6	64.7	75.2	93.3	108.4
60°	55.9	58.4	67.6	79.8	90.3
62.5°	50.0	52.9	60.1	67.6	74.8
65°	44.1	47.9	52.5	55.9	60.1
67.5°	38.6	42.8	45.4	46.2	46.6
70°	33.6	37.8	38.6	38.6	38.6
72.5°	28.6	33.2	32.3	31.9	31.5
75°	23.9	27.7	26.9	25.6	25.2
77.5°	19.3	22.7	21.4	20.6	19.3
80°	15.1	17.6	16.4	15.5	14.3
82.5°	11.3	13.0	11.8	10.9	9.7
85°	7.1	8.8	8.0	6.7	5.5
87.5°	3.8	5.0	4.2	3.8	2.1
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	11.78	13.26	12.14	13.58	13.89	14.54	16.02	14.90	16.33	16.65
	3H	13.49	14.82	13.87	15.14	15.51	15.56	16.88	15.93	17.21	17.57
	4H	14.15	15.39	14.55	15.74	16.12	15.92	17.17	16.32	17.52	17.89
	6H	14.65	15.80	15.06	16.16	16.56	16.17	17.32	16.59	17.69	18.08
	8H	14.82	15.92	15.25	16.31	16.71	16.25	17.34	16.67	17.73	18.13
	12H	14.95	16.00	15.38	16.38	16.81	16.28	17.33	16.71	17.71	18.14
4H	2H	12.55	13.80	12.96	14.15	14.53	14.81	16.05	15.21	16.40	16.78
	3H	14.48	15.51	14.89	15.91	16.31	16.06	17.09	16.47	17.49	17.89
	4H	15.29	16.22	15.72	16.63	17.07	16.55	17.48	16.98	17.89	18.33
	6H	15.93	16.74	16.39	17.18	17.64	16.93	17.73	17.38	18.18	18.64
	8H	16.15	16.91	16.62	17.35	17.82	17.04	17.79	17.50	18.24	18.71
	12H	16.33	17.00	16.81	17.48	17.95	17.11	17.78	17.59	18.26	18.73
8H	4H	15.61	16.36	16.07	16.81	17.27	16.74	17.49	17.20	17.94	18.40
	6H	16.40	17.02	16.90	17.51	17.99	17.22	17.85	17.72	18.34	18.82
	8H	16.72	17.29	17.24	17.80	18.28	17.40	17.96	17.92	18.47	18.96
	12H	17.00	17.50	17.51	17.99	18.55	17.53	18.03	18.04	18.52	19.09
12H	4H	15.63	16.31	16.11	16.78	17.26	16.75	17.43	17.23	17.91	18.38
	6H	16.45	17.01	16.97	17.52	18.01	17.26	17.82	17.78	18.33	18.82
	8H	16.85	17.34	17.36	17.83	18.40	17.49	17.99	18.00	18.48	19.05