

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: P1059155

Luminaire Tested: S123RDRP-S1165D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059155  
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-S1165D940-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, 90 CRI LEDS  
Ballast/Driver: -

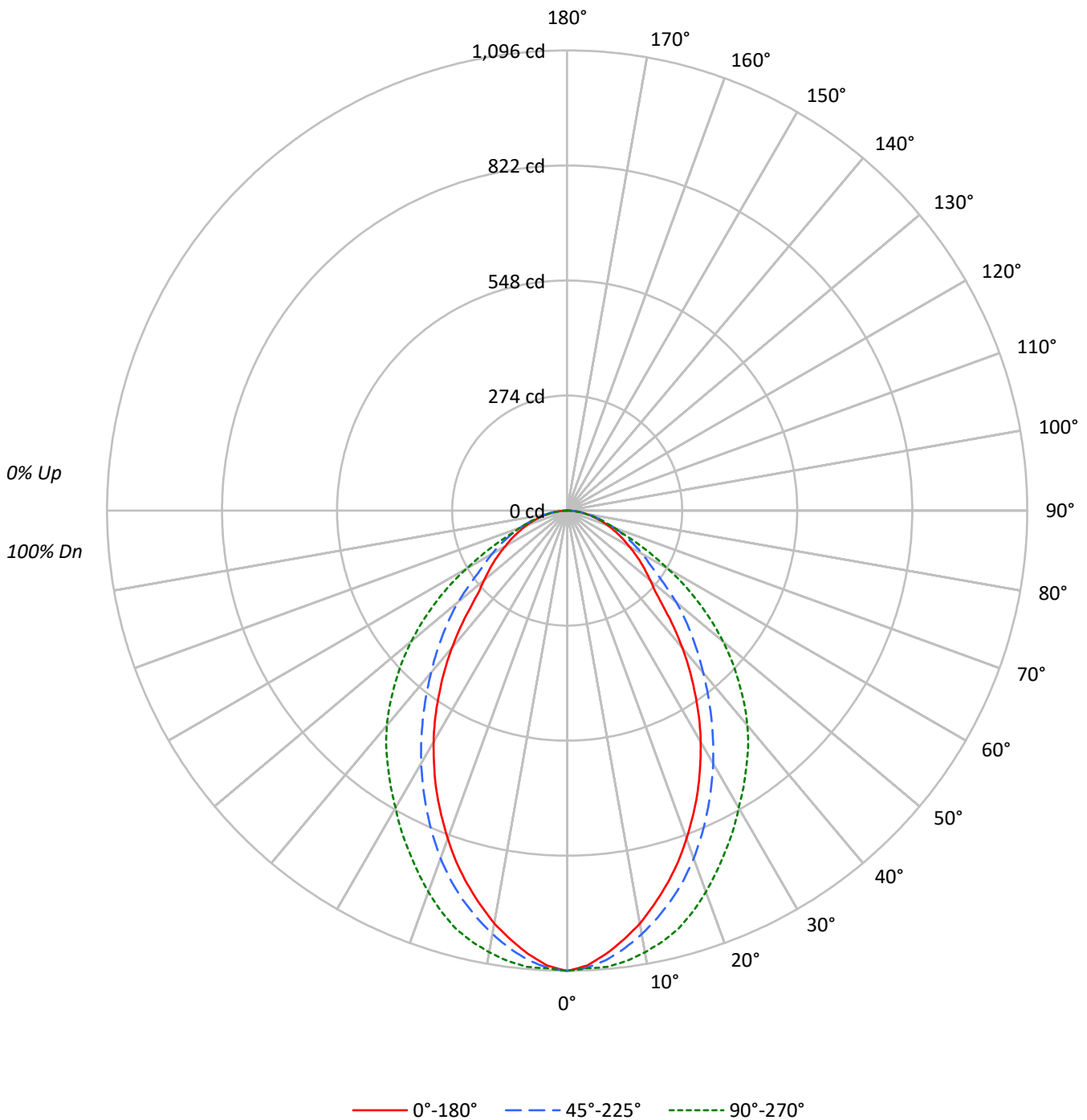
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1980.3 lumens  
Efficiency: N/A  
Efficacy: 47.4 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): 41.8  
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°	12873	12873	12873
5°	12498	12664	12861
10°	11907	12213	12734
15°	11187	11670	12514
20°	10390	11017	12077
25°	9541	10241	11573
30°	8626	9428	11083
35°	7609	8567	10667
40°	6541	7723	10244
45°	5379	6958	9603
50°	4719	6198	8851
55°	4367	5288	7841
60°	4014	4859	6489
65°	3748	4462	5107
70°	3529	4058	4058
75°	3326	3734	3498
80°	3131	3388	2955
85°	2937	3287	2250

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9603 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.4	5.1
10°-20°	271.7	13.7
20°-30°	368.4	18.6
30°-40°	385.2	19.5
40°-50°	334.1	16.9
50°-60°	248.5	12.6
60°-70°	159.5	8.1
70°-80°	85.5	4.3
80°-90°	25.8	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°	741.6	37.4
0°-40°	1126.8	56.9
0°-60°	1709.4	86.3
0°-90°	1980.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1980.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1096	1096	1096	1096	1096	
5°	1060	1078	1074	1082	1091	99
15°	920	942	960	999	1029	258
25°	736	760	790	843	893	338
35°	531	556	598	673	744	331
45°	324	348	419	509	578	255
55°	213	218	258	332	383	191
65°	135	146	161	171	184	134
75°	73	85	82	78	77	78
85°	22	27	24	21	17	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1096.3	1096.3	1096.3	1096.3	1096.3
2.5°	1084.7	1100.1	1089.8	1089.8	1091.1
5°	1060.3	1078.3	1074.4	1082.1	1091.1
7.5°	1030.7	1050.0	1051.3	1069.3	1082.1
10°	998.6	1017.9	1024.3	1050.0	1068.0
12.5°	960.0	981.9	993.4	1025.6	1051.3
15°	920.2	942.0	960.0	998.6	1029.4
17.5°	877.8	899.6	922.8	966.5	999.9
20°	831.5	854.6	881.6	925.3	966.5
22.5°	784.0	808.4	836.7	884.2	930.5
25°	736.4	759.5	790.4	843.1	893.2
27.5°	686.3	710.7	742.8	800.7	857.2
30°	636.2	660.6	695.3	757.0	817.4
32.5°	584.8	609.2	646.4	715.8	781.4
35°	530.8	556.5	597.6	673.4	744.1
37.5°	479.4	503.8	550.1	633.6	708.1
40°	426.7	452.4	503.8	593.8	668.3
42.5°	375.3	401.0	461.4	551.3	624.6
45°	323.9	348.3	419.0	508.9	578.3
47.5°	284.0	302.0	379.1	464.0	533.3
50°	258.3	264.7	339.3	420.3	484.5
52.5°	235.2	240.3	295.6	376.6	434.4
55°	213.3	218.5	258.3	331.6	383.0
57.5°	191.5	197.9	230.0	285.3	331.6
60°	170.9	178.6	206.9	244.2	276.3
62.5°	152.9	161.9	183.8	206.9	228.8
65°	134.9	146.5	160.6	170.9	183.8
67.5°	118.2	131.1	138.8	141.4	142.7
70°	102.8	115.7	118.2	118.2	118.2
72.5°	87.4	101.5	99.0	97.7	96.4
75°	73.3	84.8	82.3	78.4	77.1
77.5°	59.1	69.4	65.5	63.0	59.1
80°	46.3	54.0	50.1	47.6	43.7
82.5°	34.7	39.8	36.0	33.4	29.6
85°	21.8	27.0	24.4	20.6	16.7
87.5°	11.6	15.4	12.9	11.6	6.4
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	15.66	17.15	16.03	17.46	17.77	18.42	19.90	18.78	20.22	20.53
	3H	17.37	18.70	17.75	19.03	19.39	19.44	20.77	19.82	21.10	21.46
	4H	18.03	19.28	18.43	19.63	20.01	19.81	21.05	20.21	21.40	21.78
	6H	18.53	19.68	18.95	20.05	20.44	20.06	21.21	20.47	21.58	21.97
	8H	18.71	19.81	19.14	20.20	20.60	20.13	21.23	20.56	21.62	22.02
	12H	18.84	19.89	19.27	20.27	20.70	20.17	21.21	20.60	21.60	22.03
4H	2H	16.44	17.68	16.84	18.03	18.41	18.69	19.94	19.09	20.28	20.66
	3H	18.36	19.40	18.78	19.80	20.20	19.94	20.98	20.36	21.38	21.78
	4H	19.17	20.10	19.61	20.52	20.96	20.43	21.36	20.86	21.78	22.22
	6H	19.82	20.62	20.27	21.07	21.53	20.81	21.62	21.27	22.06	22.52
	8H	20.04	20.80	20.51	21.24	21.71	20.92	21.68	21.39	22.12	22.59
	12H	20.22	20.89	20.70	21.37	21.84	21.00	21.67	21.48	22.15	22.62
8H	4H	19.49	20.25	19.96	20.69	21.16	20.62	21.38	21.09	21.82	22.29
	6H	20.29	20.91	20.78	21.40	21.88	21.11	21.74	21.61	22.23	22.71
	8H	20.61	21.17	21.13	21.68	22.17	21.29	21.85	21.80	22.36	22.85
	12H	20.89	21.39	21.40	21.88	22.45	21.42	21.92	21.93	22.41	22.97
12H	4H	19.52	20.19	20.00	20.67	21.14	20.64	21.31	21.12	21.79	22.26
	6H	20.34	20.90	20.86	21.41	21.90	21.15	21.71	21.66	22.22	22.71
	8H	20.73	21.23	21.24	21.72	22.29	21.38	21.87	21.89	22.37	22.93