

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: P1059106

Luminaire Tested: S123RDRP-S1165D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059106  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1165D840-X4F0-XX-UDD-SVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

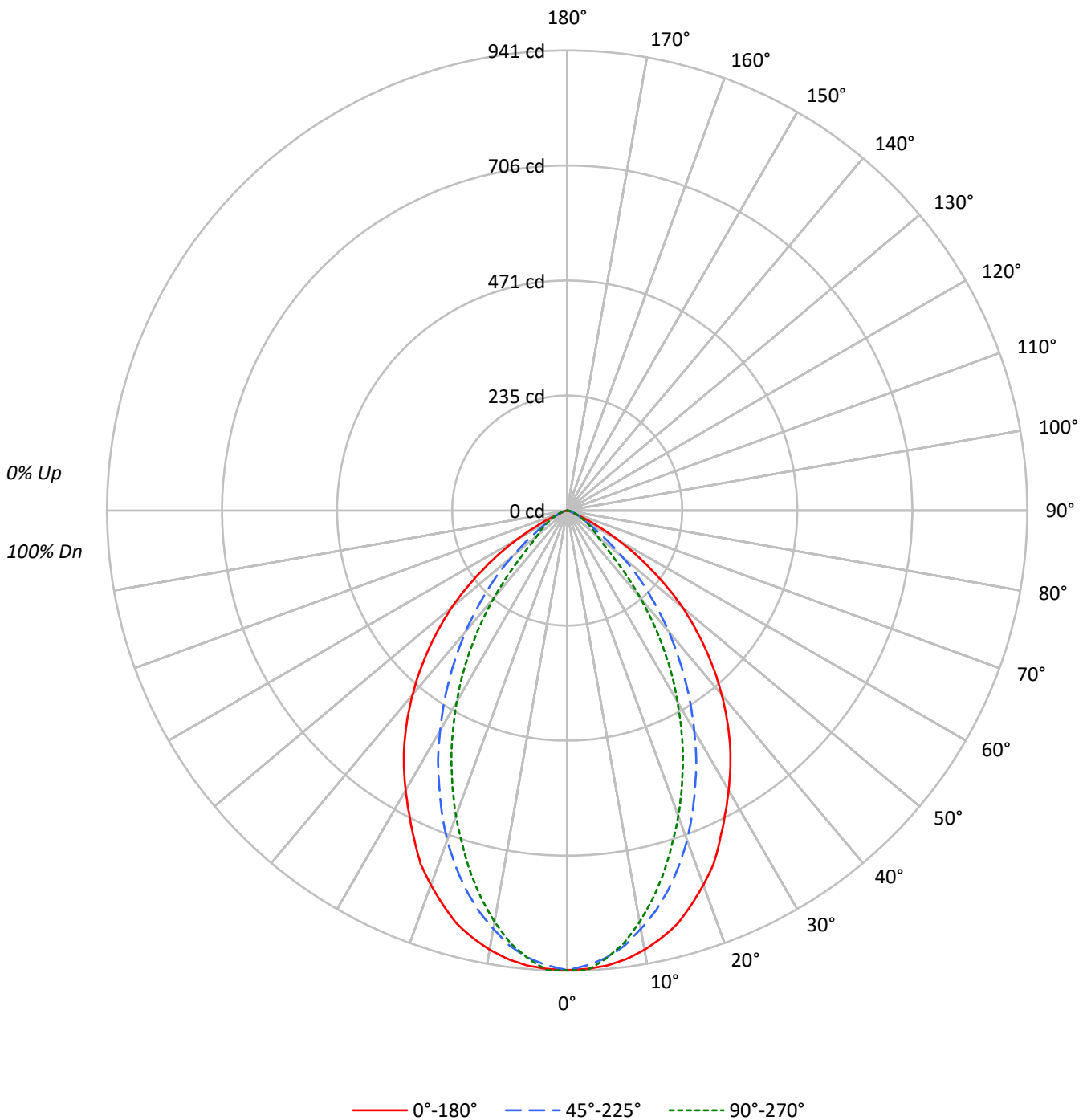
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1213.1 lumens  
Efficiency: N/A  
Efficacy: 29.0 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39

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

	0°	45°	90°
0°	11034	11034	11034
5°	11008	10820	10836
10°	10874	10354	10182
15°	10627	9744	9301
20°	10179	8961	8307
25°	9593	8029	7256
30°	8954	7041	6114
35°	8320	6005	4921
40°	7537	4950	3567
45°	6643	3841	2151
50°	5634	2684	1461
55°	4289	1607	1220
60°	2802	1024	956
65°	1173	767	767
70°	398	549	601
75°	331	395	463
80°	196	298	392
85°	202	202	391

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6643 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.8	7.2
10°-20°	227.1	18.7
20°-30°	291.3	24.0
30°-40°	273.3	22.5
40°-50°	190.7	15.7
50°-60°	98.6	8.1
60°-70°	33.7	2.8
70°-80°	9.6	0.8
80°-90°	2.0	0.2
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°	605.2	49.9
0°-40°	878.5	72.4
0°-60°	1167.7	96.3
0°-90°	1213.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1213.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	934	932	918	922	919	88
15°	874	852	802	775	765	245
25°	740	694	620	578	560	340
35°	580	509	419	365	343	361
45°	400	327	231	160	130	308
55°	210	157	78	61	60	189
65°	42	36	28	26	28	50
75°	7	7	9	10	10	7
85°	2	2	2	2	3	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	939.7	939.7	939.7	939.7	939.7
2.5°	938.2	939.7	931.0	939.7	941.1
5°	933.9	932.4	917.9	922.2	919.3
7.5°	925.1	920.8	897.5	891.7	891.7
10°	912.0	903.3	868.4	858.2	853.9
12.5°	894.6	883.0	837.9	818.9	811.7
15°	874.2	852.4	801.5	775.3	765.1
17.5°	845.1	816.0	760.8	730.2	714.2
20°	814.6	778.2	717.1	680.8	664.8
22.5°	782.6	738.9	669.1	629.8	612.4
25°	740.4	693.9	619.7	577.5	560.0
27.5°	699.7	650.2	571.7	523.7	506.2
30°	660.4	602.2	519.3	472.7	450.9
32.5°	621.1	555.7	469.8	418.9	398.6
35°	580.4	509.1	418.9	365.1	343.3
37.5°	536.8	464.0	370.9	312.7	286.6
40°	491.7	416.0	322.9	257.5	232.7
42.5°	446.6	372.4	274.9	208.0	178.9
45°	400.0	327.3	231.3	160.0	129.5
47.5°	353.5	282.2	189.1	116.4	97.5
50°	308.4	240.0	146.9	85.8	80.0
52.5°	258.9	199.3	110.6	71.3	69.8
55°	209.5	157.1	78.5	61.1	59.6
57.5°	165.8	122.2	56.7	50.9	49.5
60°	119.3	87.3	43.6	42.2	40.7
62.5°	78.5	59.6	34.9	33.5	33.5
65°	42.2	36.4	27.6	26.2	27.6
67.5°	17.5	20.4	20.4	21.8	21.8
70°	11.6	13.1	16.0	17.5	17.5
72.5°	8.7	10.2	11.6	13.1	13.1
75°	7.3	7.3	8.7	10.2	10.2
77.5°	4.4	5.8	5.8	7.3	8.7
80°	2.9	4.4	4.4	5.8	5.8
82.5°	1.5	2.9	2.9	4.4	4.4
85°	1.5	1.5	1.5	1.5	2.9
87.5°	0.0	0.0	0.0	0.0	1.5
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	14.67	15.93	15.04	16.25	16.56	8.18	9.44	8.55	9.75	10.07
	3H	14.63	15.74	15.01	16.07	16.43	8.96	10.06	9.34	10.40	10.76
	4H	14.58	15.61	14.98	15.96	16.34	9.16	10.19	9.56	10.54	10.92
	6H	14.51	15.45	14.92	15.82	16.21	9.30	10.24	9.72	10.62	11.01
	8H	14.46	15.35	14.89	15.75	16.15	9.34	10.23	9.77	10.62	11.03
	12H	14.42	15.27	14.85	15.65	16.08	9.36	10.21	9.79	10.59	11.02
4H	2H	14.52	15.55	14.92	15.90	16.29	8.44	9.47	8.84	9.82	10.20
	3H	14.51	15.34	14.92	15.75	16.15	9.34	10.18	9.76	10.58	10.99
	4H	14.45	15.20	14.89	15.62	16.06	9.62	10.36	10.05	10.78	11.23
	6H	14.40	15.04	14.86	15.48	15.95	9.83	10.47	10.30	10.92	11.39
	8H	14.35	14.94	14.82	15.39	15.86	9.90	10.49	10.37	10.94	11.41
	12H	14.30	14.82	14.79	15.31	15.78	9.93	10.46	10.42	10.94	11.42
8H	4H	14.34	14.94	14.81	15.39	15.86	9.60	10.20	10.07	10.64	11.12
	6H	14.28	14.76	14.78	15.26	15.74	9.87	10.35	10.37	10.85	11.33
	8H	14.23	14.66	14.75	15.18	15.67	9.98	10.41	10.50	10.93	11.42
	12H	14.19	14.58	14.71	15.07	15.65	10.05	10.44	10.57	10.93	11.51
12H	4H	14.30	14.82	14.78	15.30	15.78	9.56	10.09	10.05	10.57	11.05
	6H	14.22	14.66	14.75	15.17	15.67	9.83	10.27	10.36	10.78	11.28
	8H	14.19	14.58	14.71	15.07	15.65	9.97	10.36	10.49	10.85	11.43