

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: P1059511

Luminaire Tested: S123RDRP-H1165D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059511  
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-H1165D840-X4F0-XX-UDD-SVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

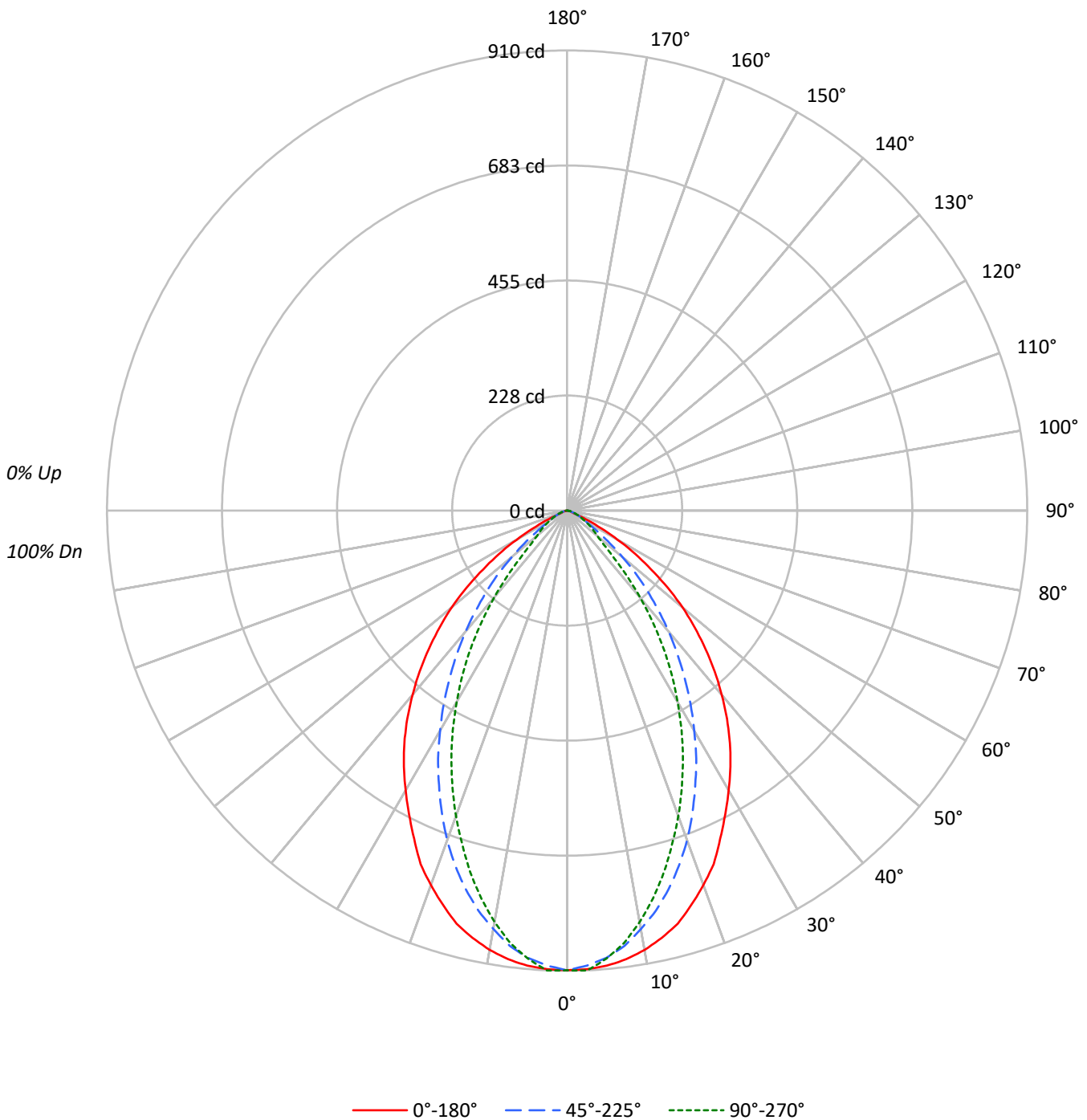
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1173.4 lumens  
Efficiency: N/A  
Efficacy: 32.1 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): 36.5  
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	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	71	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	49	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°	10674	10674	10674
5°	10649	10466	10482
10°	10519	10016	9849
15°	10281	9425	8997
20°	9847	8669	8035
25°	9279	7766	7018
30°	8661	6811	5914
35°	8048	5808	4761
40°	7290	4789	3450
45°	6427	3715	2079
50°	5449	2596	1414
55°	4148	1556	1181
60°	2710	991	925
65°	1134	742	742
70°	388	532	580
75°	318	381	445
80°	189	284	379
85°	189	189	377

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6427 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.9	7.2
10°-20°	219.7	18.7
20°-30°	281.7	24.0
30°-40°	264.4	22.5
40°-50°	184.4	15.7
50°-60°	95.4	8.1
60°-70°	32.6	2.8
70°-80°	9.3	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°	585.4	49.9
0°-40°	849.8	72.4
0°-60°	1129.6	96.3
0°-90°	1173.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1173.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	909	909	909	909	909	
5°	903	902	888	892	889	86
15°	846	825	775	750	740	237
25°	716	671	599	559	542	329
35°	561	492	405	353	332	350
45°	387	317	224	155	125	298
55°	203	152	76	59	58	182
65°	41	35	27	25	27	48
75°	7	7	8	10	10	7
85°	1	1	1	1	3	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	909.0	909.0	909.0	909.0	909.0
2.5°	907.6	909.0	900.5	909.0	910.4
5°	903.4	901.9	887.9	892.1	889.3
7.5°	894.9	890.7	868.2	862.5	862.5
10°	882.2	873.8	840.0	830.2	826.0
12.5°	865.4	854.1	810.5	792.2	785.2
15°	845.7	824.6	775.3	750.0	740.1
17.5°	817.5	789.4	735.9	706.4	690.9
20°	788.0	752.8	693.7	658.5	643.0
22.5°	757.0	714.8	647.3	609.3	592.4
25°	716.2	671.2	599.4	558.6	541.7
27.5°	676.8	629.0	553.0	506.6	489.7
30°	638.8	582.5	502.3	457.3	436.2
32.5°	600.8	537.5	454.5	405.2	385.5
35°	561.4	492.5	405.2	353.2	332.1
37.5°	519.2	448.9	358.8	302.5	277.2
40°	475.6	402.4	312.4	249.1	225.1
42.5°	432.0	360.2	265.9	201.2	173.1
45°	387.0	316.6	223.7	154.8	125.2
47.5°	341.9	273.0	182.9	112.6	94.3
50°	298.3	232.2	142.1	83.0	77.4
52.5°	250.5	192.8	106.9	68.9	67.5
55°	202.6	152.0	76.0	59.1	57.7
57.5°	160.4	118.2	54.9	49.2	47.8
60°	115.4	84.4	42.2	40.8	39.4
62.5°	76.0	57.7	33.8	32.4	32.4
65°	40.8	35.2	26.7	25.3	26.7
67.5°	16.9	19.7	19.7	21.1	21.1
70°	11.3	12.7	15.5	16.9	16.9
72.5°	8.4	9.8	11.3	12.7	12.7
75°	7.0	7.0	8.4	9.8	9.8
77.5°	4.2	5.6	5.6	7.0	8.4
80°	2.8	4.2	4.2	5.6	5.6
82.5°	1.4	2.8	2.8	4.2	4.2
85°	1.4	1.4	1.4	1.4	2.8
87.5°	0.0	0.0	0.0	0.0	1.4
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	14.56	15.82	14.92	16.13	16.45	8.06	9.32	8.42	9.63	9.95
	3H	14.51	15.62	14.89	15.95	16.32	8.83	9.94	9.22	10.27	10.64
	4H	14.46	15.49	14.86	15.84	16.23	9.04	10.07	9.44	10.42	10.80
	6H	14.39	15.33	14.80	15.70	16.10	9.18	10.12	9.59	10.49	10.89
	8H	14.35	15.24	14.78	15.63	16.04	9.21	10.10	9.65	10.50	10.90
	12H	14.30	15.15	14.74	15.54	15.97	9.23	10.08	9.66	10.46	10.90
4H	2H	14.41	15.44	14.81	15.79	16.17	8.32	9.34	8.72	9.70	10.08
	3H	14.39	15.23	14.81	15.63	16.04	9.23	10.06	9.64	10.47	10.87
	4H	14.34	15.08	14.77	15.50	15.95	9.50	10.24	9.93	10.66	11.10
	6H	14.28	14.92	14.75	15.37	15.84	9.71	10.35	10.17	10.80	11.26
	8H	14.23	14.82	14.70	15.27	15.74	9.77	10.37	10.24	10.81	11.29
	12H	14.18	14.71	14.67	15.19	15.67	9.81	10.33	10.30	10.82	11.29
8H	4H	14.23	14.82	14.70	15.27	15.74	9.48	10.07	9.95	10.52	10.99
	6H	14.16	14.65	14.67	15.14	15.63	9.75	10.23	10.25	10.73	11.21
	8H	14.11	14.55	14.64	15.06	15.56	9.85	10.29	10.38	10.80	11.30
	12H	14.07	14.46	14.59	14.95	15.53	9.92	10.31	10.44	10.80	11.38
12H	4H	14.18	14.70	14.67	15.19	15.66	9.44	9.97	9.93	10.45	10.92
	6H	14.10	14.54	14.63	15.06	15.55	9.71	10.14	10.23	10.66	11.15
	8H	14.07	14.46	14.59	14.96	15.53	9.84	10.23	10.36	10.72	11.30