

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: P1059163

Luminaire Tested: S123RDRP-S1165D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059163  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1165D950-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

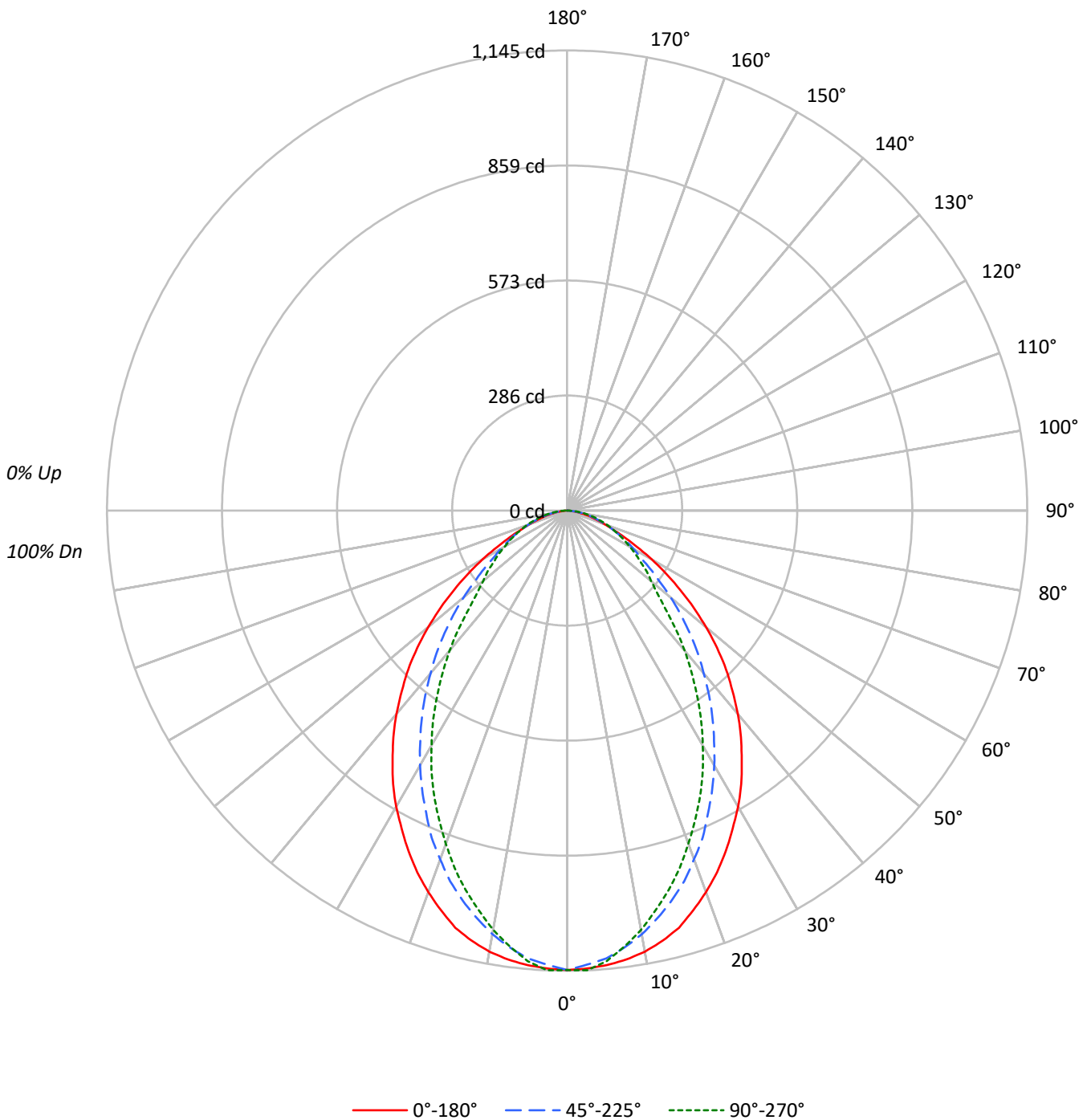
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1999.6 lumens  
Efficiency: N/A  
Efficacy: 47.8 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
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 (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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

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

	0°	45°	90°
0°	13425	13425	13425
5°	13379	13184	13265
10°	13288	12763	12632
15°	13064	12211	11877
20°	12621	11539	11024
25°	12106	10754	10147
30°	11533	9931	9148
35°	10853	9041	8096
40°	10132	8109	6971
45°	9288	7166	5728
50°	8233	6151	4971
55°	7006	5149	4557
60°	5712	4486	4227
65°	4351	3970	3932
70°	3395	3540	3680
75°	2745	3180	3430
80°	2042	2603	3158
85°	1105	1671	2775

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9288 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.1	5.3
10°-20°	285.5	14.3
20°-30°	388.2	19.4
30°-40°	402.4	20.1
40°-50°	339.4	17.0
50°-60°	240.9	12.0
60°-70°	147.2	7.4
70°-80°	73.3	3.7
80°-90°	16.6	0.8
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°	779.8	39.0
0°-40°	1182.2	59.1
0°-60°	1762.5	88.1
0°-90°	1999.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1999.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1135	1135	1118	1125	1125	108
15°	1075	1054	1004	987	977	302
25°	934	893	830	800	783	430
35°	757	699	631	587	565	474
45°	559	500	432	372	345	429
55°	342	306	252	230	223	307
65°	157	151	143	143	142	160
75°	60	65	70	73	76	65
85°	8	10	12	18	21	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1143.3	1143.3	1143.3	1143.3	1143.3
2.5°	1140.5	1141.9	1130.9	1143.3	1144.6
5°	1135.0	1135.0	1118.5	1125.4	1125.4
7.5°	1126.8	1124.0	1096.5	1096.5	1093.8
10°	1114.4	1106.2	1070.4	1063.6	1059.4
12.5°	1096.5	1082.8	1038.8	1026.5	1018.2
15°	1074.6	1054.0	1004.5	986.6	977.0
17.5°	1043.0	1022.3	967.4	942.6	931.7
20°	1010.0	979.7	923.4	898.7	882.2
22.5°	974.3	935.8	880.8	850.6	832.7
25°	934.4	893.2	830.0	799.7	783.2
27.5°	891.8	846.5	781.9	747.5	731.0
30°	850.6	798.4	732.4	693.9	674.7
32.5°	806.6	747.5	680.2	640.3	621.1
35°	757.1	699.4	630.7	586.7	564.8
37.5°	710.4	651.3	579.9	533.2	508.4
40°	661.0	601.9	529.0	480.9	454.8
42.5°	608.7	552.4	480.9	424.6	399.9
45°	559.3	500.2	431.5	372.4	344.9
47.5°	505.7	450.7	383.4	322.9	303.7
50°	450.7	399.9	336.7	281.7	272.1
52.5°	397.1	354.5	289.9	254.2	250.1
55°	342.2	306.4	251.5	229.5	222.6
57.5°	291.3	265.2	215.7	204.7	202.0
60°	243.2	221.2	191.0	184.1	180.0
62.5°	196.5	184.1	166.3	163.5	160.8
65°	156.6	151.2	142.9	142.9	141.5
67.5°	123.7	123.7	122.3	125.0	123.7
70°	98.9	100.3	103.1	105.8	107.2
72.5°	78.3	82.4	85.2	89.3	90.7
75°	60.5	64.6	70.1	72.8	75.6
77.5°	44.0	48.1	53.6	57.7	60.5
80°	30.2	33.0	38.5	44.0	46.7
82.5°	19.2	20.6	24.7	30.2	33.0
85°	8.2	9.6	12.4	17.9	20.6
87.5°	0.0	0.0	1.4	5.5	9.6
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	17.83	19.28	18.20	19.60	19.91	15.93	17.38	16.29	17.69	18.01
	3H	18.73	20.02	19.11	20.35	20.72	17.50	18.80	17.88	19.13	19.49
	4H	19.01	20.22	19.41	20.57	20.95	18.10	19.31	18.50	19.66	20.04
	6H	19.16	20.28	19.57	20.65	21.04	18.55	19.67	18.96	20.03	20.43
	8H	19.18	20.25	19.61	20.64	21.04	18.70	19.76	19.13	20.15	20.55
	12H	19.18	20.19	19.61	20.58	21.01	18.80	19.81	19.23	20.19	20.62
4H	2H	18.08	19.29	18.48	19.64	20.02	16.47	17.68	16.87	18.03	18.41
	3H	19.19	20.19	19.60	20.59	20.99	18.24	19.24	18.65	19.65	20.05
	4H	19.58	20.48	20.01	20.90	21.34	18.96	19.85	19.39	20.27	20.71
	6H	19.82	20.60	20.28	21.04	21.51	19.53	20.31	19.99	20.75	21.21
	8H	19.86	20.59	20.33	21.04	21.51	19.72	20.45	20.18	20.89	21.36
	12H	19.87	20.52	20.36	21.00	21.47	19.86	20.50	20.34	20.98	21.46
8H	4H	19.74	20.46	20.20	20.91	21.38	19.16	19.89	19.63	20.34	20.81
	6H	20.05	20.65	20.55	21.14	21.62	19.84	20.44	20.34	20.93	21.41
	8H	20.13	20.66	20.64	21.18	21.66	20.10	20.64	20.62	21.15	21.64
	12H	20.16	20.64	20.67	21.13	21.70	20.31	20.78	20.82	21.27	21.84
12H	4H	19.74	20.39	20.23	20.87	21.34	19.16	19.81	19.65	20.29	20.76
	6H	20.06	20.60	20.58	21.11	21.60	19.85	20.39	20.37	20.90	21.39
	8H	20.18	20.65	20.69	21.15	21.71	20.15	20.63	20.66	21.12	21.69