

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: P1059090

Luminaire Tested: S123RDRP-S1165D830-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059090  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1165D830-X4F0-XX-UDD-SVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

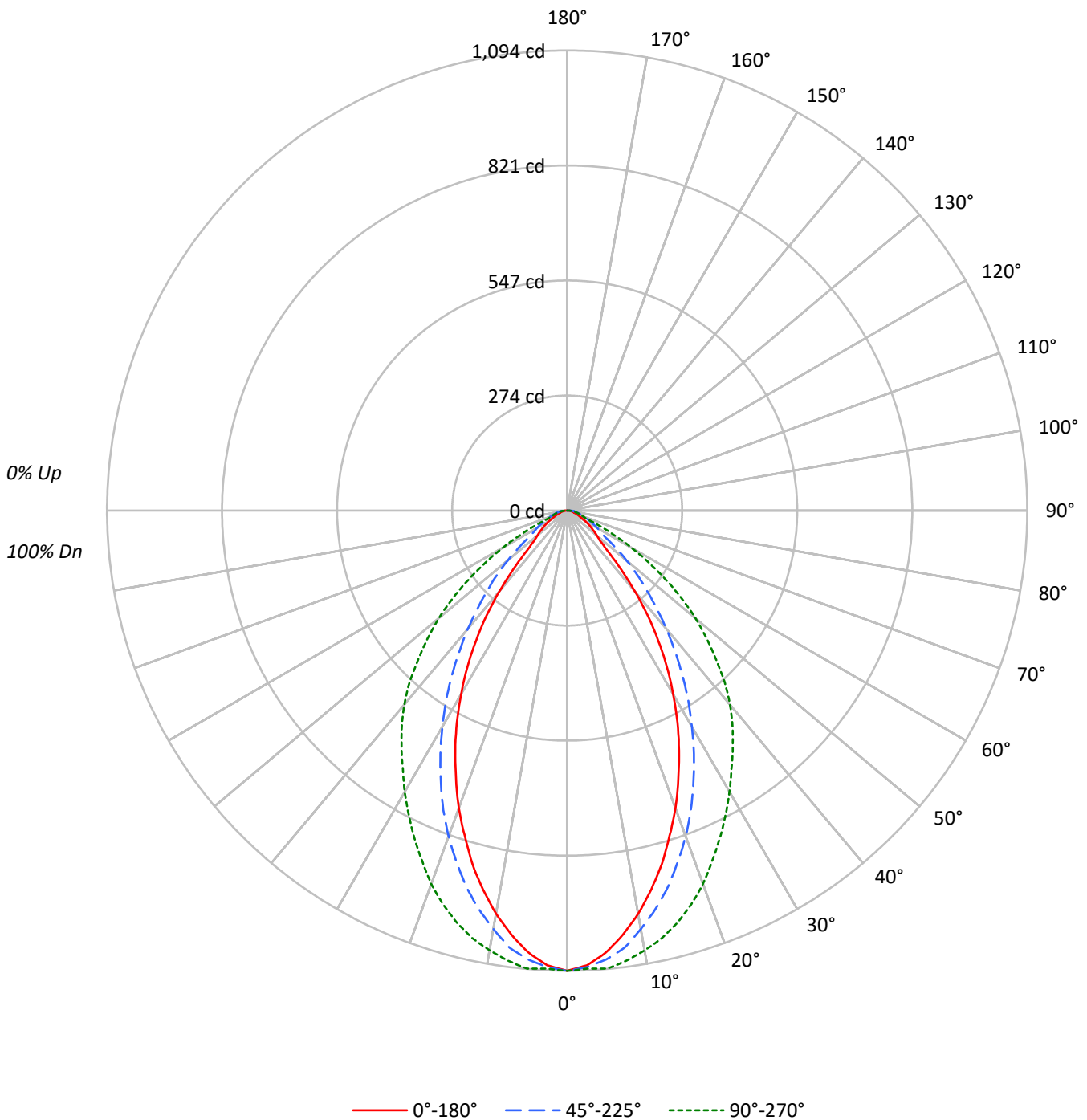
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1469.0 lumens  
Efficiency: N/A  
Efficacy: 35.1 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.08 / 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 (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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37

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

	0°	45°	90°
0°	12850	12850	12850
5°	12434	12627	12884
10°	11605	12043	12659
15°	10576	11255	12328
20°	9411	10294	11806
25°	8155	9212	11131
30°	6838	8036	10469
35°	5417	6841	9841
40°	3834	5626	9231
45°	2257	4447	8308
50°	1688	3378	7276
55°	1419	2283	5845
60°	1148	1947	4150
65°	906	1662	2189
70°	793	1445	1353
75°	740	1357	1293
80°	737	1474	1285
85°	916	2196	1644

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8308 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.7	6.9
10°-20°	261.7	17.8
20°-30°	333.3	22.7
30°-40°	313.5	21.3
40°-50°	225.8	15.4
50°-60°	130.4	8.9
60°-70°	59.6	4.1
70°-80°	29.8	2.0
80°-90°	14.1	1.0
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°	695.8	47.4
0°-40°	1009.3	68.7
0°-60°	1365.6	93.0
0°-90°	1469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1469.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1094	1094	1094	1094	1094	
5°	1055	1073	1071	1082	1093	98
15°	870	901	926	977	1014	242
25°	629	662	711	790	859	288
35°	378	410	477	587	686	234
45°	136	170	268	402	500	115
55°	69	72	112	212	286	62
65°	33	46	60	67	79	33
75°	16	31	30	28	28	17
85°	7	15	16	15	12	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1094.3	1094.3	1094.3	1094.3	1094.3
2.5°	1082.1	1095.7	1086.2	1087.5	1090.2
5°	1054.9	1072.6	1071.2	1082.1	1093.0
7.5°	1016.8	1037.2	1048.1	1064.4	1079.4
10°	973.3	996.4	1010.0	1039.9	1061.7
12.5°	923.0	952.9	970.6	1010.0	1041.3
15°	870.0	901.3	925.8	977.4	1014.1
17.5°	810.2	844.2	875.5	936.6	981.5
20°	753.1	785.7	823.8	890.4	944.8
22.5°	690.6	725.9	769.4	840.1	901.3
25°	629.4	662.0	711.0	789.8	859.1
27.5°	568.2	600.9	652.5	739.5	815.6
30°	504.3	538.3	592.7	689.2	772.1
32.5°	441.8	474.4	535.6	640.3	727.3
35°	377.9	410.5	477.2	587.3	686.5
37.5°	315.4	349.4	420.1	543.8	645.7
40°	250.1	286.8	367.0	498.9	602.2
42.5°	189.0	228.4	314.0	452.7	554.6
45°	135.9	169.9	267.8	402.4	500.3
47.5°	106.0	123.7	225.7	350.7	450.0
50°	92.4	95.2	184.9	303.1	398.3
52.5°	80.2	82.9	145.5	258.3	343.9
55°	69.3	72.0	111.5	212.1	285.5
57.5°	58.5	62.5	92.4	168.6	229.7
60°	48.9	54.4	82.9	129.1	176.7
62.5°	39.4	48.9	70.7	95.2	126.4
65°	32.6	46.2	59.8	66.6	78.8
67.5°	27.2	42.1	50.3	47.6	46.2
70°	23.1	38.1	42.1	38.1	39.4
72.5°	19.0	35.3	35.3	32.6	32.6
75°	16.3	31.3	29.9	28.5	28.5
77.5°	13.6	27.2	25.8	24.5	23.1
80°	10.9	21.8	21.8	20.4	19.0
82.5°	9.5	17.7	17.7	17.7	15.0
85°	6.8	15.0	16.3	15.0	12.2
87.5°	5.4	13.6	13.6	12.2	8.2
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	8.84	10.16	9.21	10.47	10.79	16.21	17.52	16.57	17.84	18.15
	3H	10.23	11.40	10.61	11.73	12.09	16.44	17.61	16.82	17.94	18.30
	4H	10.78	11.87	11.18	12.22	12.61	16.55	17.64	16.95	17.99	18.37
	6H	11.22	12.22	11.63	12.59	12.98	16.66	17.67	17.08	18.04	18.43
	8H	11.39	12.34	11.82	12.73	13.14	16.72	17.67	17.15	18.06	18.46
	12H	11.55	12.46	11.98	12.84	13.27	16.78	17.68	17.21	18.07	18.50
4H	2H	9.94	11.03	10.34	11.38	11.76	16.16	17.25	16.57	17.60	17.99
	3H	11.60	12.50	12.02	12.90	13.30	16.52	17.42	16.94	17.82	18.22
	4H	12.41	13.21	12.85	13.63	14.08	16.72	17.52	17.15	17.94	18.38
	6H	13.05	13.74	13.51	14.19	14.65	16.95	17.64	17.41	18.08	18.55
	8H	13.29	13.93	13.76	14.38	14.85	17.05	17.70	17.52	18.14	18.62
	12H	13.50	14.07	13.99	14.55	15.03	17.18	17.75	17.67	18.23	18.71
8H	4H	12.86	13.50	13.32	13.95	14.42	16.76	17.40	17.23	17.85	18.32
	6H	13.77	14.30	14.27	14.80	15.28	17.09	17.62	17.59	18.11	18.59
	8H	14.19	14.67	14.71	15.18	15.67	17.28	17.75	17.80	18.27	18.76
	12H	14.61	15.03	15.12	15.53	16.10	17.53	17.95	18.04	18.44	19.01
12H	4H	12.91	13.48	13.40	13.97	14.44	16.75	17.32	17.23	17.80	18.28
	6H	13.90	14.38	14.43	14.90	15.39	17.10	17.58	17.62	18.09	18.59
	8H	14.44	14.87	14.96	15.36	15.93	17.36	17.78	17.87	18.28	18.85