

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: P1059037

Luminaire Tested: S123RDRP-S1000D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059037  
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-S1000D850-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, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

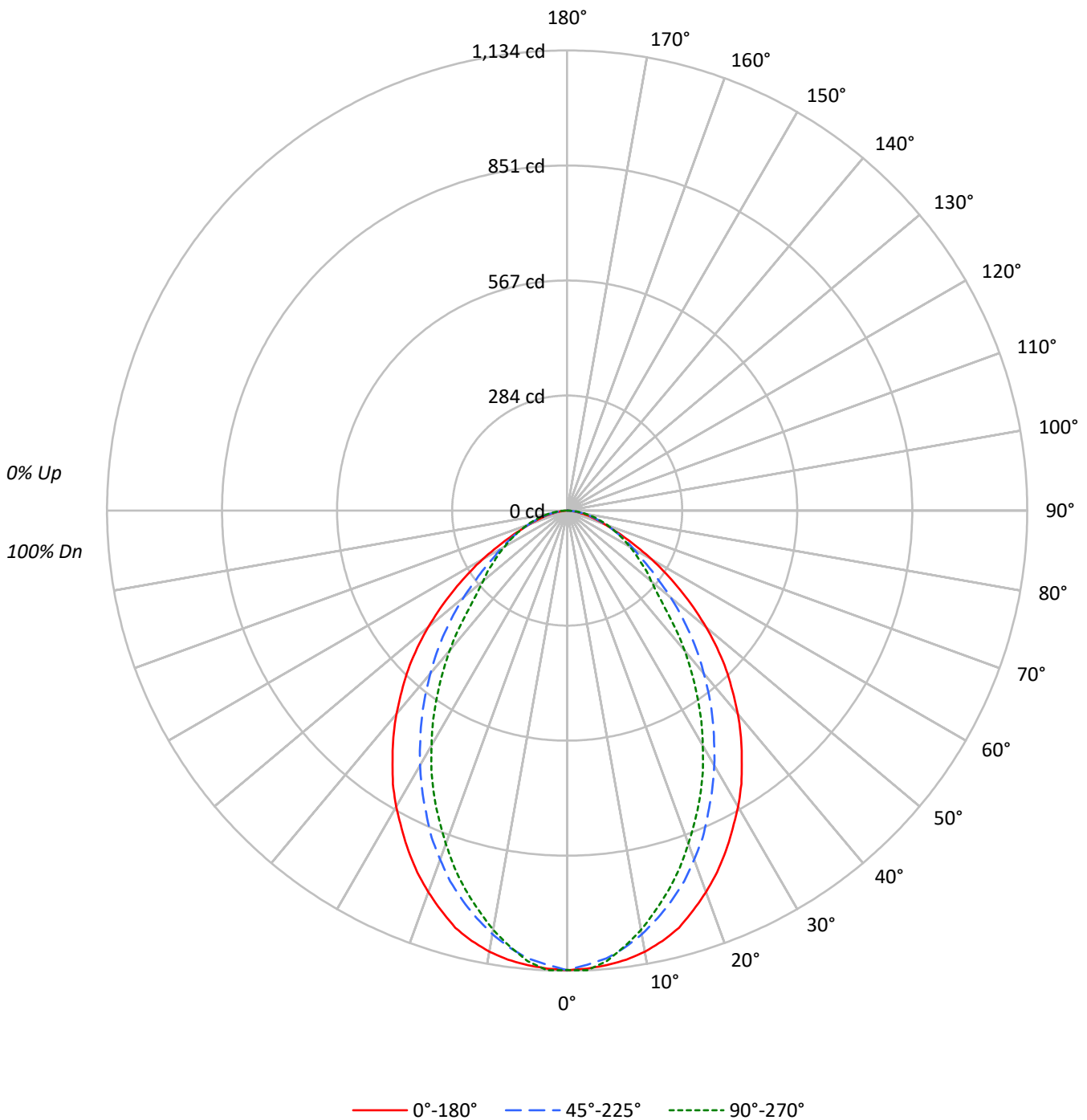
Lumens per Lamp: N/A  
Luminaire Lumens: 1980.7 lumens  
Efficiency: N/A  
Efficacy: 56.6 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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°	13297	13297	13297
5°	13252	13059	13139
10°	13161	12643	12513
15°	12940	12096	11764
20°	12501	11430	10919
25°	11991	10651	10052
30°	11423	9837	9061
35°	10751	8955	8019
40°	10036	8032	6906
45°	9200	7098	5673
50°	8155	6092	4923
55°	6938	5100	4514
60°	5658	4443	4187
65°	4312	3934	3895
70°	3365	3505	3646
75°	2718	3149	3398
80°	2022	2576	3131
85°	1105	1644	2748

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9200 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.1	5.3
10°-20°	282.8	14.3
20°-30°	384.5	19.4
30°-40°	398.6	20.1
40°-50°	336.2	17.0
50°-60°	238.6	12.0
60°-70°	145.8	7.4
70°-80°	72.6	3.7
80°-90°	16.5	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°	772.4	39.0
0°-40°	1171.0	59.1
0°-60°	1745.8	88.1
0°-90°	1980.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1980.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1132	1132	1132	1132	1132	
5°	1124	1124	1108	1115	1115	107
15°	1064	1044	995	977	968	299
25°	926	885	822	792	776	425
35°	750	693	625	581	559	469
45°	554	495	427	369	342	425
55°	339	304	249	227	220	304
65°	155	150	142	142	140	158
75°	60	64	69	72	75	65
85°	8	10	12	18	20	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1132.4	1132.4	1132.4	1132.4	1132.4
2.5°	1129.7	1131.1	1120.2	1132.4	1133.8
5°	1124.3	1124.3	1107.9	1114.7	1114.7
7.5°	1116.1	1113.4	1086.2	1086.2	1083.4
10°	1103.8	1095.7	1060.3	1053.5	1049.4
12.5°	1086.2	1072.5	1029.0	1016.7	1008.6
15°	1064.4	1044.0	995.0	977.3	967.7
17.5°	1033.1	1012.7	958.2	933.7	922.8
20°	1000.4	970.5	914.7	890.2	873.8
22.5°	965.0	926.9	872.5	842.5	824.8
25°	925.5	884.7	822.1	792.2	775.8
27.5°	883.3	838.4	774.5	740.4	724.1
30°	842.5	790.8	725.5	687.4	668.3
32.5°	799.0	740.4	673.7	634.3	615.2
35°	750.0	692.8	624.7	581.2	559.4
37.5°	703.7	645.2	574.4	528.1	503.6
40°	654.7	596.2	524.0	476.4	450.5
42.5°	603.0	547.2	476.4	420.6	396.1
45°	554.0	495.4	427.4	368.9	341.6
47.5°	500.9	446.4	379.7	319.9	300.8
50°	446.4	396.1	333.5	279.0	269.5
52.5°	393.4	351.2	287.2	251.8	247.7
55°	338.9	303.5	249.1	227.3	220.5
57.5°	288.6	262.7	213.7	202.8	200.1
60°	240.9	219.1	189.2	182.4	178.3
62.5°	194.6	182.4	164.7	162.0	159.2
65°	155.2	149.7	141.6	141.6	140.2
67.5°	122.5	122.5	121.1	123.9	122.5
70°	98.0	99.4	102.1	104.8	106.2
72.5°	77.6	81.7	84.4	88.5	89.8
75°	59.9	64.0	69.4	72.1	74.9
77.5°	43.6	47.6	53.1	57.2	59.9
80°	29.9	32.7	38.1	43.6	46.3
82.5°	19.1	20.4	24.5	29.9	32.7
85°	8.2	9.5	12.2	17.7	20.4
87.5°	0.0	0.0	1.4	5.4	9.5
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	17.80	19.25	18.16	19.56	19.88	15.90	17.35	16.26	17.66	17.97
	3H	18.70	19.99	19.08	20.32	20.68	17.47	18.76	17.85	19.09	19.46
	4H	18.98	20.19	19.38	20.54	20.92	18.06	19.28	18.47	19.63	20.01
	6H	19.13	20.25	19.54	20.61	21.01	18.52	19.63	18.93	20.00	20.39
	8H	19.15	20.21	19.58	20.60	21.01	18.67	19.73	19.09	20.12	20.52
	12H	19.15	20.16	19.58	20.54	20.97	18.76	19.78	19.20	20.16	20.59
4H	2H	18.04	19.26	18.44	19.61	19.99	16.44	17.65	16.84	18.00	18.38
	3H	19.16	20.16	19.57	20.56	20.96	18.21	19.21	18.62	19.61	20.02
	4H	19.55	20.45	19.98	20.86	21.30	18.92	19.82	19.36	20.24	20.68
	6H	19.79	20.57	20.25	21.01	21.47	19.50	20.27	19.95	20.72	21.18
	8H	19.83	20.56	20.30	21.00	21.47	19.69	20.41	20.15	20.86	21.33
	12H	19.84	20.49	20.32	20.97	21.44	19.83	20.47	20.31	20.95	21.43
8H	4H	19.71	20.43	20.17	20.88	21.35	19.13	19.86	19.60	20.31	20.77
	6H	20.02	20.62	20.52	21.11	21.59	19.81	20.41	20.31	20.90	21.38
	8H	20.09	20.63	20.61	21.14	21.63	20.07	20.60	20.58	21.11	21.60
	12H	20.13	20.60	20.64	21.10	21.66	20.27	20.75	20.79	21.24	21.81
12H	4H	19.71	20.36	20.19	20.84	21.31	19.13	19.78	19.61	20.26	20.73
	6H	20.03	20.57	20.55	21.08	21.57	19.82	20.36	20.33	20.87	21.36
	8H	20.15	20.62	20.66	21.11	21.68	20.12	20.60	20.63	21.09	21.66