

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059420

Luminaire Tested: S123RDR-H1000D835-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059420  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H1000D835-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

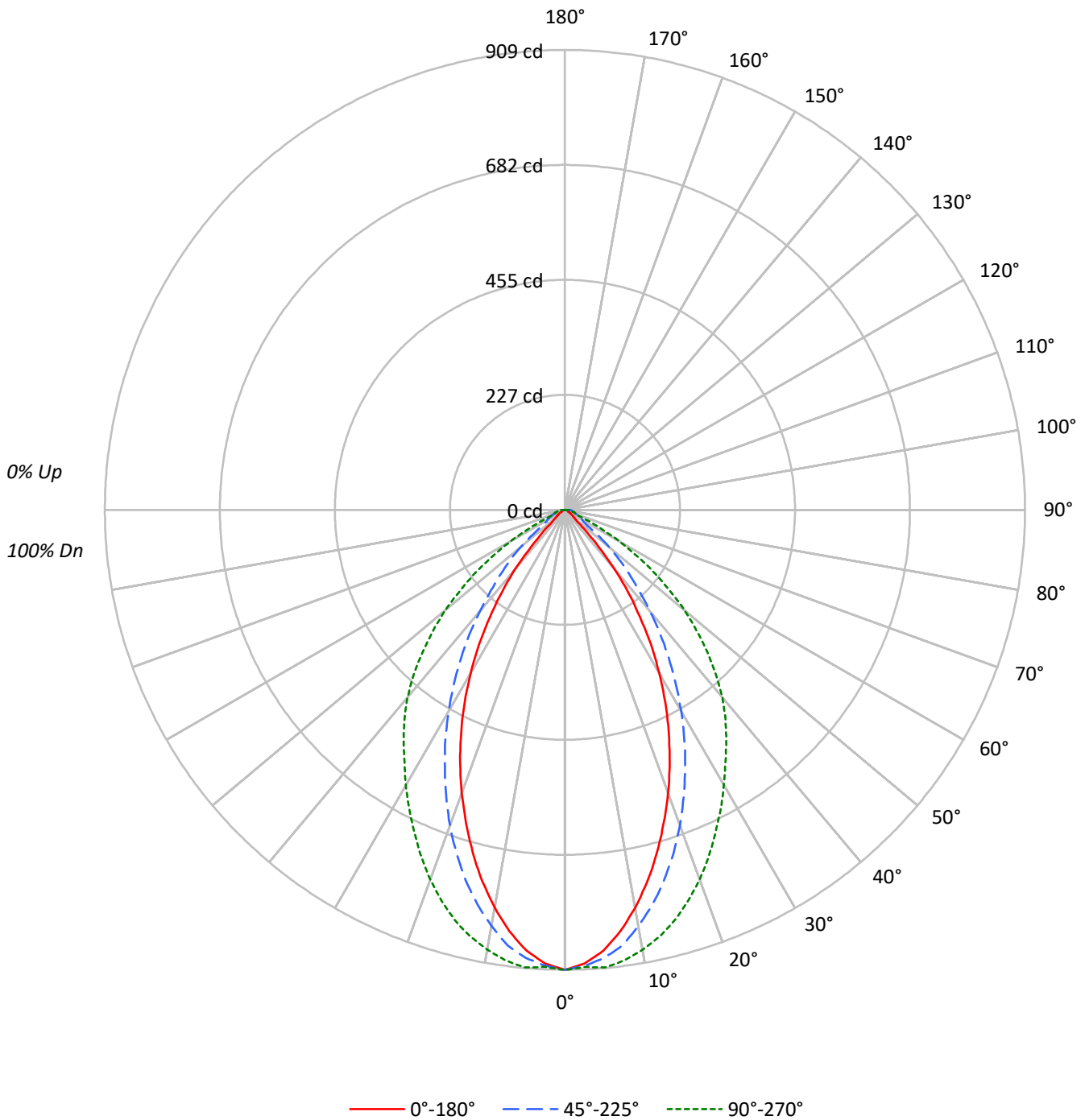
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1091.4 lumens  
Efficiency: N/A  
Efficacy: 35.0 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40

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

	0°	45°	90°
0°	10675	10675	10675
5°	10307	10477	10702
10°	9515	9956	10526
15°	8539	9207	10209
20°	7449	8300	9718
25°	6284	7275	9116
30°	5053	6220	8520
35°	3698	5120	7963
40°	2307	3992	7416
45°	873	2976	6606
50°	415	2051	5630
55°	317	1126	4352
60°	225	953	2860
65°	167	831	1195
70°	165	779	779
75°	218	812	812
80°	325	967	886
85°	647	1603	1293

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6606 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.5	7.6
10°-20°	214.0	19.6
20°-30°	264.9	24.3
30°-40°	237.5	21.8
40°-50°	155.7	14.3
50°-60°	77.9	7.1
60°-70°	30.4	2.8
70°-80°	17.1	1.6
80°-90°	10.5	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°	562.3	51.5
0°-40°	799.8	73.3
0°-60°	1033.4	94.7
0°-90°	1091.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1091.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	909	909	909	909	909	
5°	874	889	889	898	908	81
15°	702	731	757	808	840	196
25°	485	515	562	642	704	221
35°	258	293	357	465	556	161
45°	53	85	179	307	398	50
55°	16	19	55	150	213	14
65°	6	18	30	39	43	6
75°	5	18	18	18	18	5
85°	5	12	12	12	10	4
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	909.1	909.1	909.1	909.1	909.1
2.5°	897.1	910.3	901.9	903.1	904.3
5°	874.4	888.8	888.8	898.3	907.9
7.5°	839.8	856.5	868.5	885.2	898.3
10°	798.0	818.3	835.0	864.9	882.8
12.5°	752.6	777.7	799.2	838.6	863.7
15°	702.4	731.1	757.4	807.5	839.8
17.5°	648.7	677.3	712.0	770.5	809.9
20°	596.1	624.8	664.2	729.9	777.7
22.5°	541.1	571.0	612.8	685.7	741.8
25°	485.0	514.9	561.5	641.5	703.6
27.5°	428.9	458.7	511.3	598.5	666.6
30°	372.7	402.6	458.7	551.9	628.4
32.5°	316.6	348.8	407.4	508.9	590.1
35°	258.0	292.7	357.2	464.7	555.5
37.5°	204.3	236.5	309.4	426.5	520.8
40°	150.5	185.2	260.4	389.4	483.8
42.5°	98.0	135.0	216.2	348.8	442.0
45°	52.6	84.8	179.2	307.0	397.8
47.5°	28.7	46.6	144.5	262.8	352.4
50°	22.7	26.3	112.3	224.6	308.2
52.5°	19.1	21.5	80.0	188.7	259.2
55°	15.5	19.1	55.0	150.5	212.6
57.5°	13.1	16.7	43.0	117.1	166.0
60°	9.6	14.3	40.6	86.0	121.8
62.5°	7.2	15.5	35.8	59.7	80.0
65°	6.0	17.9	29.9	39.4	43.0
67.5°	4.8	19.1	26.3	25.1	25.1
70°	4.8	17.9	22.7	21.5	22.7
72.5°	4.8	19.1	20.3	19.1	20.3
75°	4.8	17.9	17.9	17.9	17.9
77.5°	4.8	16.7	16.7	15.5	15.5
80°	4.8	14.3	14.3	14.3	13.1
82.5°	4.8	13.1	13.1	13.1	10.8
85°	4.8	11.9	11.9	11.9	9.6
87.5°	3.6	10.8	11.9	10.8	7.2
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	0.57	1.83	0.94	2.14	2.46	14.83	16.09	15.20	16.40	16.72
	3H	2.91	4.02	3.29	4.35	4.72	14.91	16.02	15.29	16.35	16.72
	4H	4.02	5.05	4.42	5.40	5.79	14.99	16.02	15.39	16.37	16.76
	6H	5.01	5.96	5.43	6.33	6.73	15.09	16.04	15.51	16.41	16.81
	8H	5.49	6.39	5.93	6.78	7.19	15.15	16.05	15.58	16.44	16.85
	12H	6.05	6.91	6.49	7.29	7.73	15.23	16.09	15.67	16.47	16.90
4H	2H	3.83	4.87	4.24	5.22	5.60	14.69	15.72	15.09	16.07	16.46
	3H	6.15	7.00	6.56	7.40	7.80	14.86	15.71	15.28	16.11	16.52
	4H	7.52	8.28	7.96	8.70	9.14	15.01	15.77	15.45	16.19	16.63
	6H	8.61	9.26	9.07	9.71	10.17	15.24	15.89	15.70	16.34	16.80
	8H	9.06	9.67	9.53	10.12	10.59	15.36	15.97	15.83	16.42	16.89
	12H	9.56	10.10	10.04	10.58	11.05	15.54	16.08	16.02	16.56	17.03
8H	4H	8.49	9.10	8.96	9.55	10.02	15.01	15.62	15.48	16.07	16.54
	6H	10.01	10.51	10.51	11.01	11.49	15.35	15.84	15.85	16.34	16.82
	8H	10.78	11.23	11.31	11.75	12.24	15.58	16.03	16.10	16.54	17.04
	12H	11.59	11.99	12.10	12.48	13.05	15.91	16.31	16.43	16.81	17.38
12H	4H	8.67	9.21	9.16	9.69	10.16	14.99	15.53	15.48	16.02	16.49
	6H	10.32	10.77	10.85	11.29	11.78	15.36	15.81	15.89	16.33	16.82
	8H	11.28	11.68	11.79	12.17	12.74	15.67	16.07	16.19	16.57	17.14