

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: P1059527

Luminaire Tested: S123RDR-H1165D927-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059527  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H1165D927-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

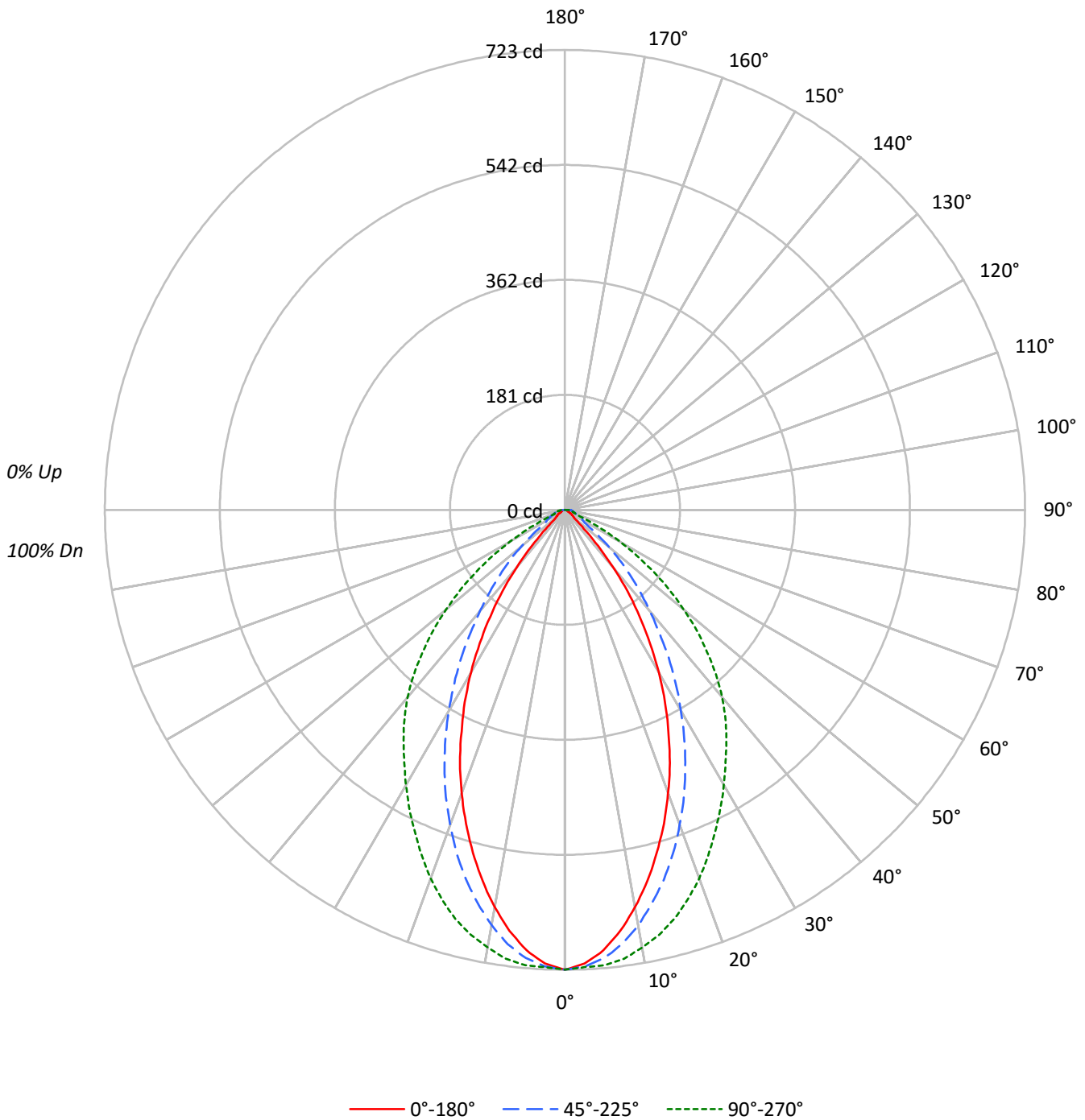
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 868.2 lumens  
Efficiency: N/A  
Efficacy: 23.8 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): 36.5  
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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				90
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81				81
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73				73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66				66
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				55
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50				50
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46				46
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40				40

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

	0°	45°	90°
0°	8487	8487	8487
5°	8195	8337	8468
10°	7564	7907	8329
15°	6785	7309	8088
20°	5924	6588	7706
25°	4983	5799	7231
30°	4001	4945	6773
35°	2931	4071	6337
40°	1813	3168	5895
45°	697	2386	5249
50°	343	1635	4441
55°	272	905	3484
60°	181	754	2337
65°	153	675	1045
70°	151	608	608
75°	200	653	603
80°	298	825	669
85°	445	1334	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5249 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.3	7.6
10°-20°	169.7	19.5
20°-30°	210.6	24.3
30°-40°	188.6	21.7
40°-50°	124.0	14.3
50°-60°	62.1	7.2
60°-70°	24.5	2.8
70°-80°	13.8	1.6
80°-90°	8.6	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°	446.5	51.4
0°-40°	635.2	73.2
0°-60°	821.3	94.6
0°-90°	868.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	868.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	723	723	723	723	723	
5°	695	706	707	712	718	64
15°	558	576	601	642	665	156
25°	385	409	448	511	558	176
35°	204	232	284	371	442	127
45°	42	70	144	242	316	40
55°	13	16	44	119	170	12
65°	6	16	24	31	38	6
75°	4	14	14	13	13	5
85°	3	10	10	10	7	4
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	722.8	722.8	722.8	722.8	722.8
2.5°	713.9	723.9	718.4	718.4	719.5
5°	695.2	706.2	707.3	711.7	718.4
7.5°	667.5	681.9	688.5	701.8	711.7
10°	634.4	649.8	663.1	686.3	698.5
12.5°	597.9	613.4	633.3	665.3	684.1
15°	558.1	575.8	601.2	642.1	665.3
17.5°	517.2	534.9	565.8	612.3	642.1
20°	474.1	494.0	527.2	580.2	616.7
22.5°	431.0	453.1	488.5	546.0	588.0
25°	384.6	408.9	447.6	510.6	558.1
27.5°	340.4	365.8	406.7	475.2	529.4
30°	295.1	320.5	364.7	438.8	499.5
32.5°	248.7	277.4	323.8	404.5	469.7
35°	204.5	232.1	284.0	371.3	442.1
37.5°	161.4	189.0	243.1	339.3	414.4
40°	118.3	147.0	206.7	308.3	384.6
42.5°	77.4	107.2	174.6	277.4	351.4
45°	42.0	69.6	143.7	242.0	316.1
47.5°	23.2	37.6	116.0	208.9	281.8
50°	18.8	21.0	89.5	177.9	243.1
52.5°	15.5	17.7	64.1	148.1	207.8
55°	13.3	15.5	44.2	119.4	170.2
57.5°	11.1	13.3	35.4	91.7	133.7
60°	7.7	13.3	32.1	67.4	99.5
62.5°	6.6	13.3	27.6	46.4	66.3
65°	5.5	15.5	24.3	30.9	37.6
67.5°	4.4	15.5	21.0	19.9	19.9
70°	4.4	15.5	17.7	16.6	17.7
72.5°	4.4	16.6	16.6	15.5	15.5
75°	4.4	14.4	14.4	13.3	13.3
77.5°	4.4	13.3	13.3	12.2	12.2
80°	4.4	12.2	12.2	11.1	9.9
82.5°	4.4	11.1	11.1	9.9	8.8
85°	3.3	9.9	9.9	9.9	6.6
87.5°	3.3	8.8	9.9	8.8	5.5
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	0.00	1.17	0.27	1.48	1.79	13.97	15.23	14.34	15.54	15.86
	3H	2.42	3.54	2.80	3.87	4.23	14.05	15.17	14.43	15.50	15.86
	4H	3.59	4.62	3.99	4.97	5.36	14.12	15.15	14.52	15.50	15.89
	6H	4.63	5.58	5.05	5.96	6.35	14.22	15.17	14.63	15.54	15.93
	8H	5.17	6.07	5.60	6.46	6.87	14.28	15.18	14.71	15.57	15.97
	12H	5.65	6.51	6.08	6.89	7.32	14.34	15.20	14.78	15.59	16.02
4H	2H	3.15	4.19	3.56	4.54	4.93	13.83	14.87	14.24	15.22	15.61
	3H	5.62	6.46	6.03	6.87	7.27	14.01	14.86	14.42	15.26	15.66
	4H	6.96	7.72	7.40	8.14	8.59	14.14	14.90	14.57	15.32	15.76
	6H	8.10	8.75	8.56	9.20	9.67	14.36	15.01	14.82	15.46	15.92
	8H	8.61	9.22	9.08	9.67	10.14	14.48	15.09	14.95	15.54	16.01
	12H	9.06	9.60	9.55	10.08	10.56	14.64	15.18	15.12	15.66	16.13
8H	4H	7.88	8.49	8.35	8.94	9.41	14.14	14.75	14.61	15.20	15.67
	6H	9.49	9.99	9.99	10.48	10.97	14.47	14.97	14.98	15.47	15.95
	8H	10.31	10.76	10.84	11.28	11.77	14.70	15.15	15.22	15.67	16.16
	12H	11.09	11.48	11.60	11.98	12.55	15.02	15.42	15.54	15.92	16.49
12H	4H	8.05	8.59	8.54	9.08	9.55	14.13	14.67	14.62	15.16	15.63
	6H	9.80	10.25	10.33	10.77	11.26	14.51	14.96	15.03	15.47	15.97
	8H	10.81	11.21	11.33	11.71	12.28	14.81	15.21	15.33	15.71	16.28