

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: P1059724

Luminaire Tested: S123RDR-H560D950-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059724  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D950-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

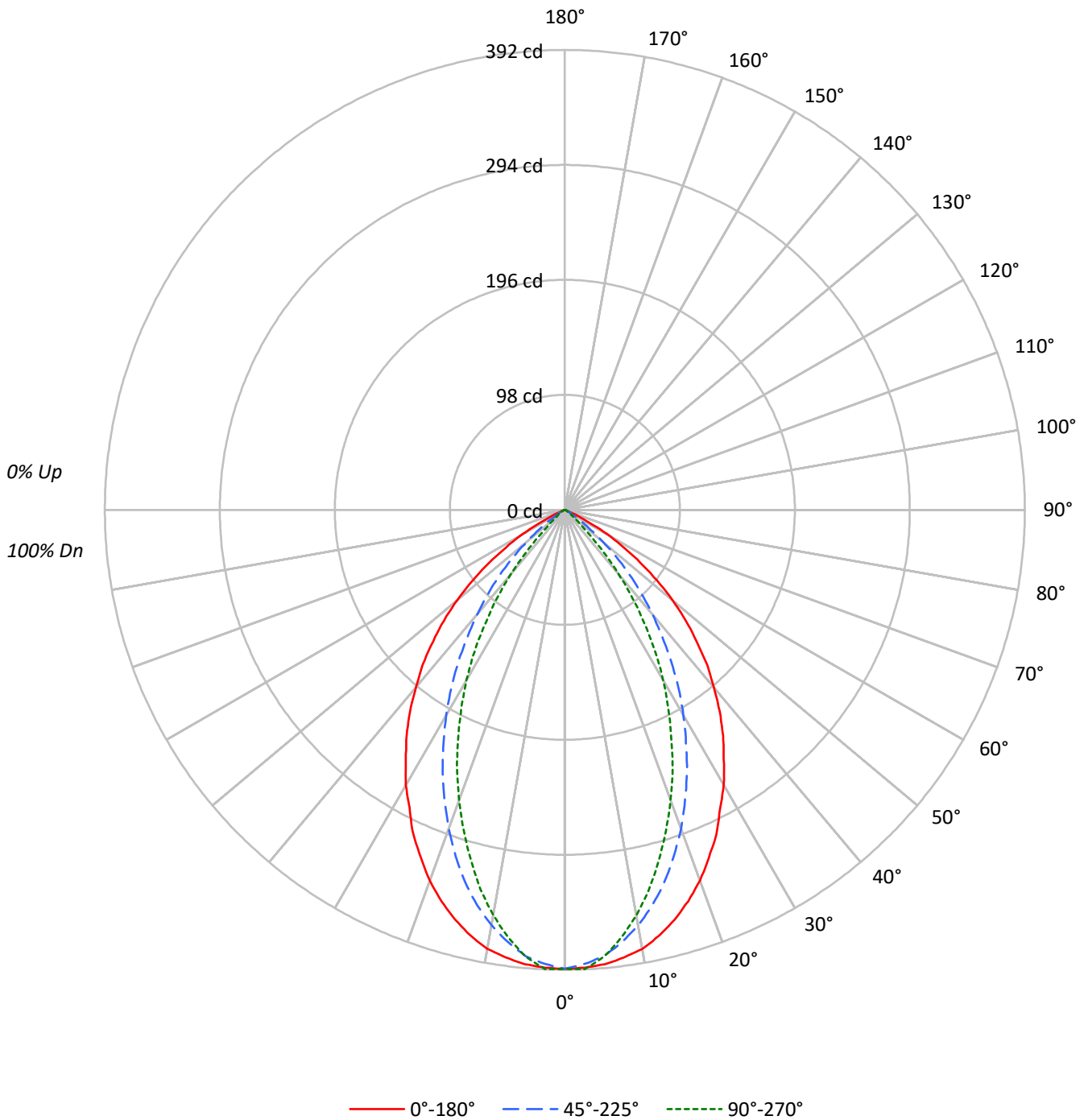
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 446.4 lumens  
Efficiency: N/A  
Efficacy: 25.7 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

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

	0°	45°	90°
0°	4594	4594	4594
5°	4582	4500	4507
10°	4530	4289	4184
15°	4396	3990	3760
20°	4204	3614	3290
25°	3958	3191	2783
30°	3673	2742	2272
35°	3369	2266	1689
40°	3023	1777	1082
45°	2637	1297	450
50°	2187	771	172
55°	1611	321	129
60°	977	117	73
65°	261	69	36
70°	0	21	21
75°	0	0	27
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2637 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.0	8.1
10°-20°	92.9	20.8
20°-30°	115.8	25.9
30°-40°	103.6	23.2
40°-50°	65.4	14.6
50°-60°	27.4	6.1
60°-70°	5.1	1.2
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	244.8	54.8
0°-40°	348.4	78.0
0°-60°	441.1	98.8
0°-90°	446.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	446.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	391	391	391	391	391	
5°	389	388	382	383	382	37
15°	362	353	328	314	309	101
25°	306	281	246	225	215	140
35°	235	201	158	130	118	146
45°	159	124	78	42	27	122
55°	79	54	16	6	6	71
65°	9	7	2	1	1	13
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	391.2	391.2	391.2	391.2	391.2
2.5°	390.6	391.2	387.4	391.2	391.8
5°	388.7	388.1	381.8	383.0	382.4
7.5°	384.9	383.0	371.7	369.2	367.9
10°	379.9	374.8	359.7	353.4	350.9
12.5°	371.7	364.7	345.2	335.1	331.4
15°	361.6	352.8	328.2	314.4	309.3
17.5°	349.6	337.0	309.3	294.2	286.6
20°	336.4	318.8	289.2	270.9	263.3
22.5°	320.7	301.1	267.7	248.2	240.0
25°	305.5	281.0	246.3	224.9	214.8
27.5°	286.6	260.8	223.6	201.6	190.9
30°	270.9	241.3	202.2	177.6	167.6
32.5°	252.0	221.1	180.2	153.1	143.6
35°	235.0	201.0	158.1	129.8	117.8
37.5°	216.7	181.4	136.1	106.5	95.1
40°	197.2	161.9	115.9	83.2	70.6
42.5°	179.5	142.4	95.8	61.7	49.1
45°	158.8	123.5	78.1	41.6	27.1
47.5°	139.9	105.8	59.2	23.3	14.5
50°	119.7	87.6	42.2	12.0	9.4
52.5°	98.9	69.9	27.7	8.2	7.6
55°	78.7	54.2	15.7	6.3	6.3
57.5°	59.2	39.1	8.2	5.0	4.4
60°	41.6	25.8	5.0	3.8	3.1
62.5°	23.9	15.1	3.8	2.5	2.5
65°	9.4	6.9	2.5	1.3	1.3
67.5°	0.6	1.9	1.3	0.6	0.6
70°	0.0	0.0	0.6	0.6	0.6
72.5°	0.0	0.0	0.6	0.6	0.6
75°	0.0	0.0	0.0	0.0	0.6
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	10.49	11.67	10.86	11.98	12.30	0.00	0.00	0.00	0.00	0.00
	3H	10.33	11.36	10.71	11.70	12.06	0.00	0.00	0.00	0.00	0.00
	4H	10.25	11.20	10.65	11.55	11.94	0.00	0.00	0.00	0.00	0.00
	6H	10.15	11.03	10.57	11.40	11.79	0.00	0.00	0.00	0.00	0.00
	8H	10.10	10.93	10.54	11.32	11.73	0.00	0.00	0.00	0.00	0.00
	12H	10.05	10.84	10.49	11.22	11.65	0.00	0.00	0.00	0.00	0.00
4H	2H	10.25	11.21	10.66	11.56	11.94	0.00	0.00	0.00	0.00	0.00
	3H	10.09	10.85	10.50	11.26	11.67	0.00	0.00	0.00	0.00	0.00
	4H	9.98	10.66	10.42	11.09	11.53	0.00	0.00	0.00	0.00	0.00
	6H	9.89	10.47	10.35	10.92	11.39	0.00	0.00	0.00	0.00	0.00
	8H	9.82	10.36	10.29	10.81	11.29	0.00	0.00	0.00	0.00	0.00
	12H	9.76	10.24	10.25	10.73	11.20	0.00	0.00	0.00	0.00	0.00
8H	4H	9.82	10.37	10.29	10.81	11.29	0.00	0.00	0.00	0.00	0.00
	6H	9.70	10.14	10.21	10.64	11.13	0.00	0.00	0.00	0.00	0.00
	8H	9.63	10.03	10.16	10.55	11.04	0.00	0.00	0.00	0.00	0.00
	12H	9.58	9.93	10.10	10.42	11.00	0.00	0.00	0.00	0.00	0.00
12H	4H	9.76	10.24	10.25	10.73	11.20	0.00	0.00	0.00	0.00	0.00
	6H	9.63	10.03	10.16	10.55	11.04	0.00	0.00	0.00	0.00	0.00
	8H	9.58	9.93	10.10	10.42	11.00	0.00	0.00	0.00	0.00	0.00