

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: P1059731

Luminaire Tested: S123RDR-H560D950-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059731  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D950-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

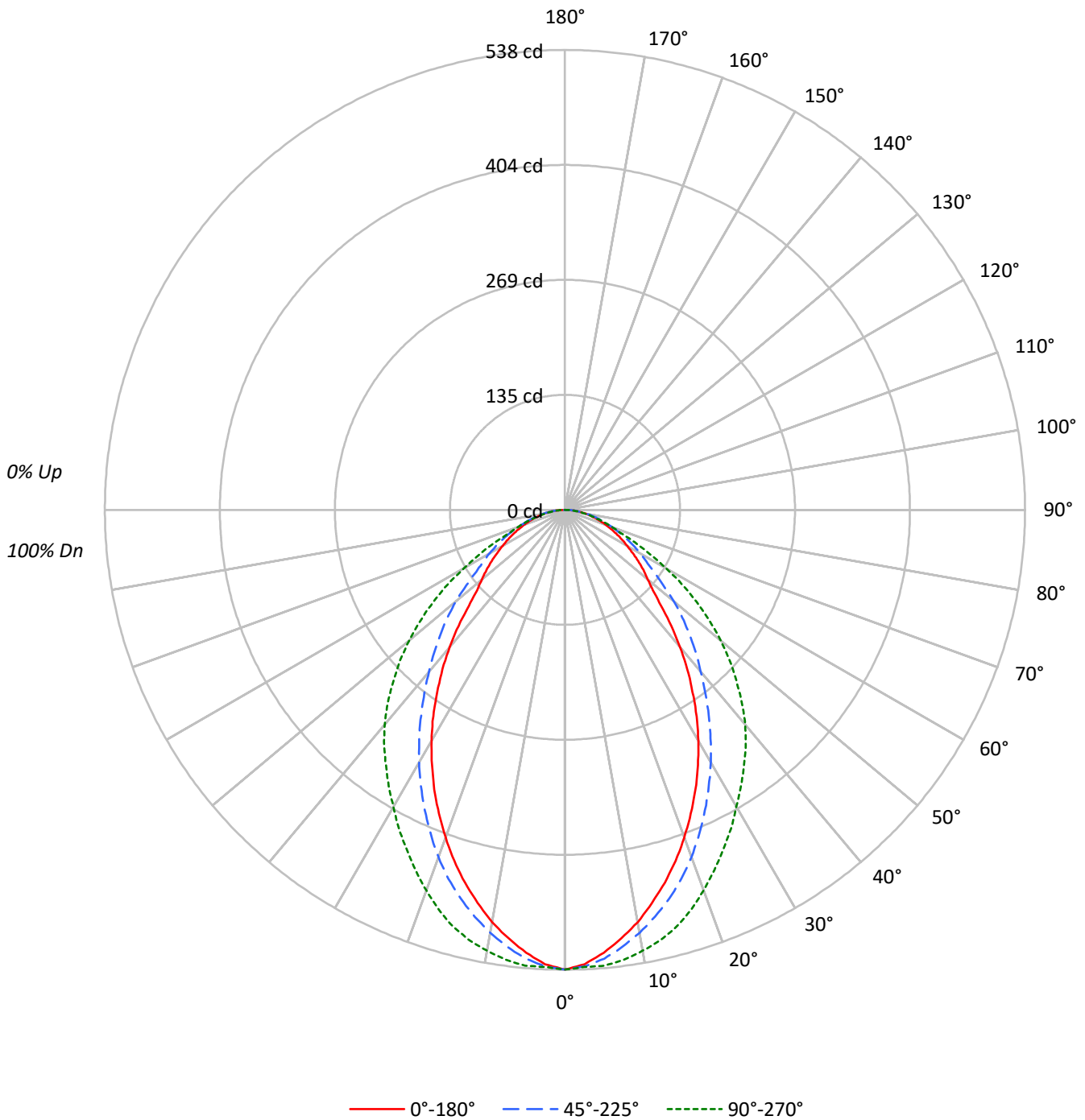
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 971.3 lumens  
Efficiency: N/A  
Efficacy: 55.8 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
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	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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87			87	
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75			75	
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65			65	
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57			57	
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51			51	
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45			45	
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41			41	
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37			37	
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34			34	
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31			31	

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

	0°	45°	90°
0°	6314	6314	6314
5°	6131	6212	6309
10°	5840	5990	6246
15°	5488	5725	6138
20°	5097	5403	5923
25°	4680	5023	5676
30°	4230	4624	5436
35°	3731	4202	5232
40°	3208	3788	5025
45°	2639	3413	4711
50°	2315	3040	4342
55°	2141	2594	3847
60°	1968	2384	3182
65°	1839	2189	2503
70°	1730	1991	1991
75°	1629	1828	1715
80°	1535	1664	1447
85°	1442	1617	1105

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4711 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.7	5.1
10°-20°	133.3	13.7
20°-30°	180.7	18.6
30°-40°	188.9	19.5
40°-50°	163.9	16.9
50°-60°	121.9	12.6
60°-70°	78.2	8.1
70°-80°	41.9	4.3
80°-90°	12.7	1.3
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°	363.7	37.4
0°-40°	552.7	56.9
0°-60°	838.5	86.3
0°-90°	971.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	971.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	520	529	527	531	535	49
15°	451	462	471	490	505	127
25°	361	373	388	414	438	166
35°	260	273	293	330	365	163
45°	159	171	206	250	284	125
55°	105	107	127	163	188	94
65°	66	72	79	84	90	66
75°	36	42	40	38	38	38
85°	11	13	12	10	8	12
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	537.7	537.7	537.7	537.7	537.7
2.5°	532.0	539.6	534.6	534.6	535.2
5°	520.1	528.9	527.0	530.8	535.2
7.5°	505.6	515.0	515.7	524.5	530.8
10°	489.8	499.3	502.4	515.0	523.8
12.5°	470.9	481.6	487.3	503.0	515.7
15°	451.4	462.1	470.9	489.8	504.9
17.5°	430.6	441.3	452.6	474.0	490.4
20°	407.9	419.2	432.4	453.9	474.0
22.5°	384.5	396.5	410.4	433.7	456.4
25°	361.2	372.6	387.7	413.5	438.1
27.5°	336.6	348.6	364.4	392.7	420.5
30°	312.0	324.0	341.0	371.3	400.9
32.5°	286.8	298.8	317.1	351.1	383.3
35°	260.3	273.0	293.1	330.3	365.0
37.5°	235.1	247.1	269.8	310.8	347.3
40°	209.3	221.9	247.1	291.2	327.8
42.5°	184.1	196.7	226.3	270.4	306.4
45°	158.9	170.8	205.5	249.6	283.7
47.5°	139.3	148.1	186.0	227.6	261.6
50°	126.7	129.9	166.4	206.1	237.7
52.5°	115.4	117.9	145.0	184.7	213.1
55°	104.6	107.2	126.7	162.6	187.9
57.5°	93.9	97.1	112.8	139.9	162.6
60°	83.8	87.6	101.5	119.8	135.5
62.5°	75.0	79.4	90.1	101.5	112.2
65°	66.2	71.9	78.8	83.8	90.1
67.5°	58.0	64.3	68.1	69.3	70.0
70°	50.4	56.7	58.0	58.0	58.0
72.5°	42.9	49.8	48.5	47.9	47.3
75°	35.9	41.6	40.3	38.5	37.8
77.5°	29.0	34.0	32.1	30.9	29.0
80°	22.7	26.5	24.6	23.3	21.4
82.5°	17.0	19.5	17.7	16.4	14.5
85°	10.7	13.2	12.0	10.1	8.2
87.5°	5.7	7.6	6.3	5.7	3.2
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	13.19	14.67	13.55	14.99	15.30	15.94	17.43	16.31	17.74	18.05
	3H	14.90	16.23	15.28	16.56	16.92	16.96	18.29	17.34	18.62	18.98
	4H	15.56	16.80	15.96	17.15	17.53	17.33	18.57	17.73	18.92	19.30
	6H	16.06	17.21	16.47	17.58	17.97	17.58	18.73	18.00	19.10	19.49
	8H	16.24	17.33	16.66	17.72	18.12	17.65	18.75	18.08	19.14	19.54
	12H	16.36	17.41	16.79	17.79	18.22	17.69	18.74	18.12	19.12	19.55
4H	2H	13.96	15.21	14.36	15.56	15.94	16.21	17.46	16.61	17.81	18.19
	3H	15.89	16.92	16.30	17.32	17.72	17.47	18.50	17.88	18.90	19.30
	4H	16.70	17.63	17.13	18.04	18.48	17.96	18.89	18.39	19.30	19.74
	6H	17.34	18.15	17.80	18.59	19.05	18.34	19.14	18.79	19.59	20.05
	8H	17.57	18.32	18.03	18.77	19.23	18.45	19.20	18.91	19.65	20.12
	12H	17.74	18.41	18.22	18.89	19.36	18.52	19.19	19.00	19.67	20.14
8H	4H	17.02	17.77	17.48	18.22	18.69	18.15	18.90	18.61	19.35	19.82
	6H	17.81	18.44	18.31	18.93	19.41	18.64	19.26	19.13	19.75	20.23
	8H	18.14	18.70	18.65	19.21	19.70	18.81	19.37	19.33	19.88	20.37
	12H	18.41	18.91	18.93	19.40	19.97	18.94	19.44	19.45	19.93	20.50
12H	4H	17.04	17.72	17.53	18.20	18.67	18.16	18.84	18.65	19.32	19.79
	6H	17.87	18.43	18.38	18.94	19.43	18.67	19.23	19.19	19.74	20.23
	8H	18.26	18.75	18.77	19.25	19.81	18.90	19.40	19.41	19.89	20.46