

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: P1059272

Luminaire Tested: S123RDRP-S560D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059272  
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: S123RDRP-S560D840-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

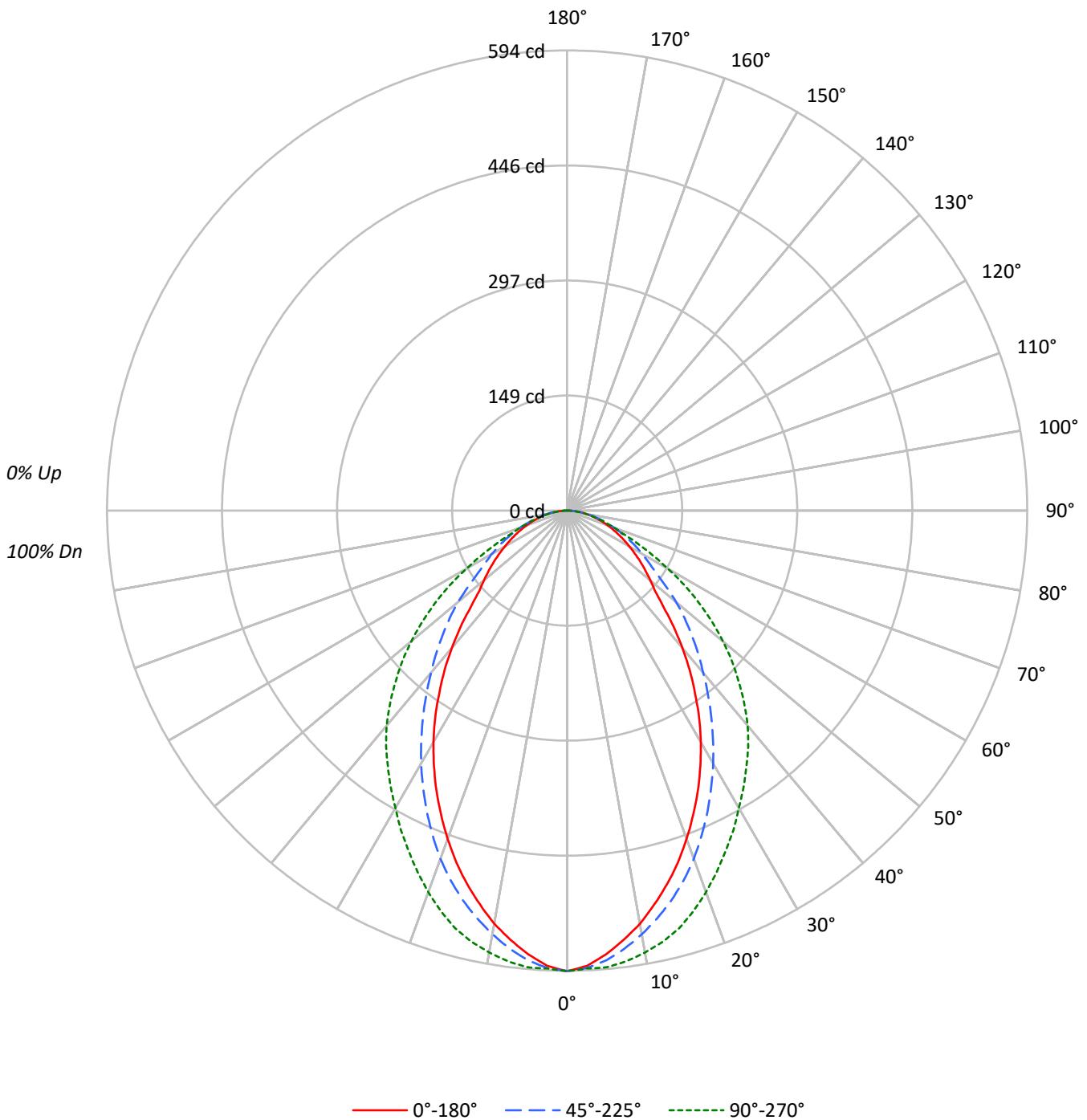
Lumens per Lamp: N/A  
Luminaire Lumens: 1073.9 lumens  
Efficiency: N/A  
Efficacy: 54.8 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.6  
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	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°	6981	6981	6981
5°	6778	6867	6975
10°	6457	6622	6905
15°	6066	6329	6786
20°	5634	5974	6549
25°	5173	5553	6276
30°	4678	5112	6009
35°	4126	4646	5784
40°	3547	4188	5555
45°	2916	3773	5208
50°	2559	3361	4799
55°	2369	2868	4252
60°	2177	2635	3518
65°	2034	2420	2770
70°	1916	2201	2201
75°	1801	2023	1896
80°	1697	1839	1603
85°	1590	1778	1226

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5208 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.0	5.1
10°-20°	147.4	13.7
20°-30°	199.8	18.6
30°-40°	208.9	19.5
40°-50°	181.2	16.9
50°-60°	134.8	12.6
60°-70°	86.5	8.1
70°-80°	46.4	4.3
80°-90°	14.0	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°	402.1	37.4
0°-40°	611.0	56.9
0°-60°	927.0	86.3
0°-90°	1073.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1073.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	575	585	583	587	592	54
15°	499	511	521	542	558	140
25°	399	412	429	457	484	183
35°	288	302	324	365	404	180
45°	176	189	227	276	314	138
55°	116	118	140	180	208	104
65°	73	79	87	93	100	73
75°	40	46	45	42	42	42
85°	12	15	13	11	9	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	594.5	594.5	594.5	594.5	594.5
2.5°	588.2	596.6	591.0	591.0	591.7
5°	575.0	584.7	582.6	586.8	591.7
7.5°	558.9	569.4	570.1	579.8	586.8
10°	541.5	552.0	555.4	569.4	579.1
12.5°	520.6	532.4	538.7	556.1	570.1
15°	499.0	510.8	520.6	541.5	558.2
17.5°	476.0	487.8	500.4	524.1	542.2
20°	450.9	463.5	478.1	501.8	524.1
22.5°	425.1	438.4	453.7	479.5	504.6
25°	399.3	411.9	428.6	457.2	484.4
27.5°	372.2	385.4	402.8	434.2	464.8
30°	345.0	358.2	377.0	410.5	443.2
32.5°	317.1	330.3	350.5	388.2	423.7
35°	287.8	301.8	324.1	365.2	403.5
37.5°	260.0	273.2	298.3	343.6	384.0
40°	231.4	245.3	273.2	322.0	362.4
42.5°	203.5	217.4	250.2	299.0	338.7
45°	175.6	188.9	227.2	276.0	313.6
47.5°	154.0	163.8	205.6	251.6	289.2
50°	140.1	143.6	184.0	227.9	262.7
52.5°	127.5	130.3	160.3	204.2	235.6
55°	115.7	118.5	140.1	179.8	207.7
57.5°	103.8	107.3	124.7	154.7	179.8
60°	92.7	96.9	112.2	132.4	149.8
62.5°	82.9	87.8	99.7	112.2	124.1
65°	73.2	79.4	87.1	92.7	99.7
67.5°	64.1	71.1	75.3	76.7	77.4
70°	55.8	62.7	64.1	64.1	64.1
72.5°	47.4	55.1	53.7	53.0	52.3
75°	39.7	46.0	44.6	42.5	41.8
77.5°	32.1	37.6	35.5	34.1	32.1
80°	25.1	29.3	27.2	25.8	23.7
82.5°	18.8	21.6	19.5	18.1	16.0
85°	11.8	14.6	13.2	11.2	9.1
87.5°	6.3	8.4	7.0	6.3	3.5
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	13.54	15.02	13.90	15.33	15.65	16.29	17.78	16.66	18.09	18.40
	3H	15.25	16.58	15.62	16.90	17.27	17.31	18.64	17.69	18.97	19.33
	4H	15.91	17.15	16.31	17.50	17.88	17.68	18.92	18.08	19.27	19.65
	6H	16.41	17.56	16.82	17.93	18.32	17.93	19.08	18.35	19.45	19.84
	8H	16.59	17.68	17.01	18.07	18.47	18.00	19.10	18.43	19.49	19.89
	12H	16.71	17.76	17.14	18.14	18.57	18.04	19.09	18.47	19.47	19.90
4H	2H	14.31	15.56	14.71	15.91	16.29	16.56	17.81	16.96	18.16	18.54
	3H	16.24	17.27	16.65	17.67	18.07	17.82	18.85	18.23	19.25	19.65
	4H	17.05	17.98	17.48	18.39	18.83	18.31	19.23	18.74	19.65	20.09
	6H	17.69	18.50	18.15	18.94	19.40	18.69	19.49	19.14	19.94	20.40
	8H	17.92	18.67	18.38	19.12	19.58	18.80	19.55	19.26	20.00	20.47
	12H	18.09	18.76	18.57	19.24	19.71	18.87	19.54	19.35	20.02	20.49
8H	4H	17.37	18.12	17.83	18.57	19.03	18.50	19.25	18.96	19.70	20.16
	6H	18.16	18.79	18.66	19.28	19.76	18.98	19.61	19.48	20.10	20.58
	8H	18.49	19.05	19.00	19.56	20.05	19.16	19.72	19.68	20.23	20.72
	12H	18.76	19.26	19.27	19.75	20.32	19.29	19.79	19.80	20.28	20.85
12H	4H	17.39	18.07	17.87	18.54	19.02	18.51	19.19	18.99	19.66	20.14
	6H	18.21	18.78	18.73	19.29	19.78	19.02	19.58	19.54	20.09	20.58
	8H	18.61	19.10	19.12	19.60	20.16	19.25	19.75	19.76	20.24	20.80