

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: P1059677

Luminaire Tested: S123RDR-H560D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059677
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-H560D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

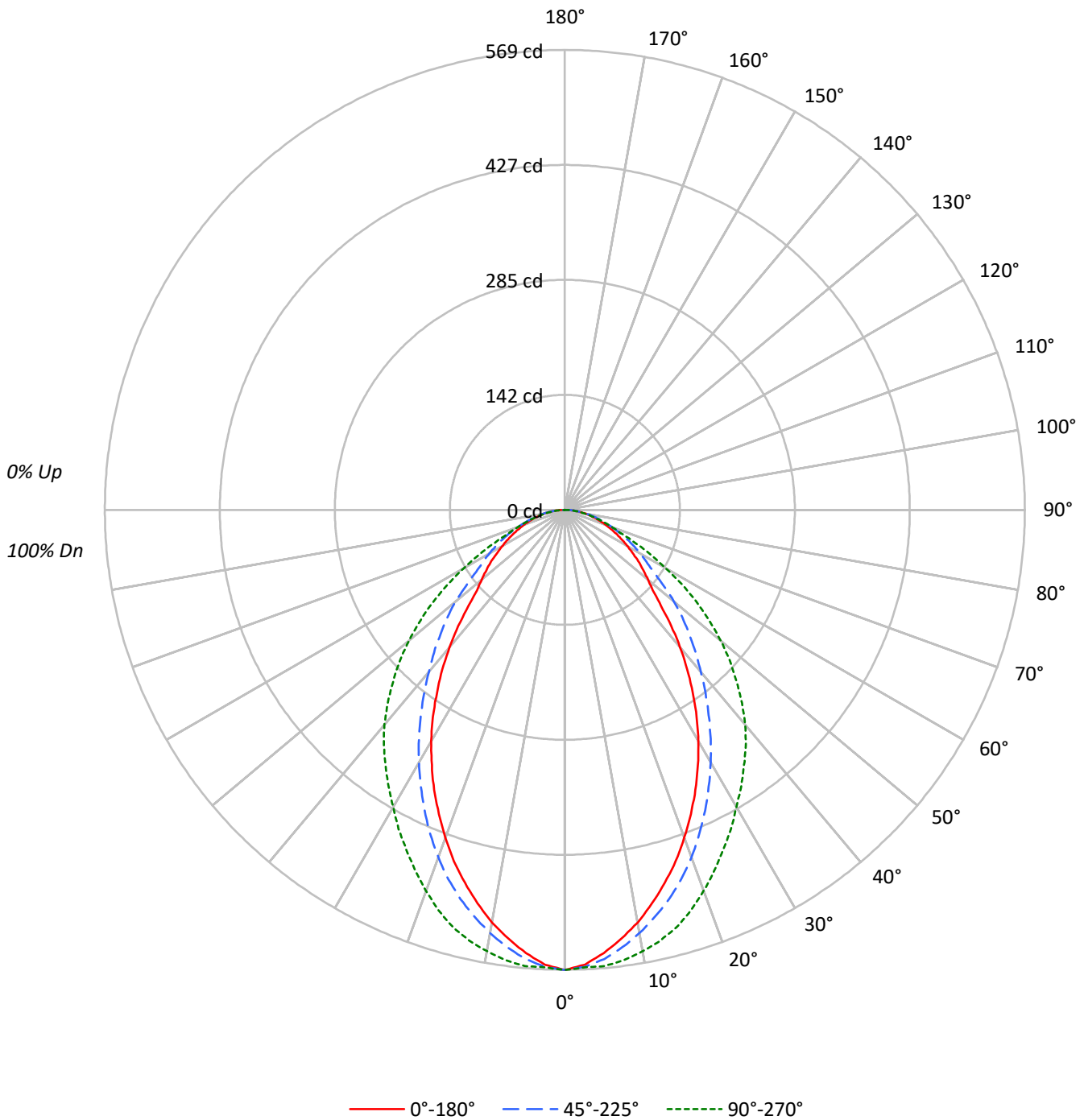
Lumens per Lamp: N/A
Luminaire Lumens: 1028.2 lumens
Efficiency: N/A
Efficacy: 59.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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										
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	100	100	100	100	100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	75	75	75	75	75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57														
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51	51	51	51	51	51	51														
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45														
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41	41	41	41	41	41	41														
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34	34	34	34	34	34	34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31	31	31	31	31	31	31														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6684	6684	6684
5°	6489	6576	6677
10°	6182	6341	6612
15°	5808	6060	6498
20°	5395	5721	6271
25°	4955	5317	6009
30°	4479	4895	5754
35°	3951	4448	5539
40°	3395	4010	5319
45°	2793	3612	4987
50°	2450	3219	4596
55°	2268	2745	4072
60°	2085	2522	3370
65°	1948	2317	2651
70°	1833	2108	2108
75°	1724	1937	1815
80°	1623	1758	1535
85°	1522	1711	1172

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4987 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.6	5.1
10°-20°	141.1	13.7
20°-30°	191.3	18.6
30°-40°	200.0	19.5
40°-50°	173.5	16.9
50°-60°	129.0	12.6
60°-70°	82.8	8.1
70°-80°	44.4	4.3
80°-90°	13.4	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°	385.0	37.4
0°-40°	585.1	56.9
0°-60°	887.6	86.3
0°-90°	1028.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1028.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	569	569	569	569	569	
5°	550	560	558	562	566	52
15°	478	489	498	518	534	134
25°	382	394	410	438	464	175
35°	276	289	310	350	386	172
45°	168	181	218	264	300	132
55°	111	113	134	172	199	99
65°	70	76	83	89	95	70
75°	38	44	43	41	40	40
85°	11	14	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°	569.2	569.2	569.2	569.2	569.2
2.5°	563.2	571.2	565.9	565.9	566.5
5°	550.5	559.9	557.9	561.9	566.5
7.5°	535.2	545.2	545.8	555.2	561.9
10°	518.5	528.5	531.8	545.2	554.5
12.5°	498.5	509.8	515.8	532.5	545.8
15°	477.8	489.1	498.5	518.5	534.5
17.5°	455.8	467.1	479.1	501.8	519.2
20°	431.7	443.8	457.8	480.5	501.8
22.5°	407.1	419.7	434.4	459.1	483.1
25°	382.4	394.4	410.4	437.7	463.8
27.5°	356.3	369.0	385.7	415.7	445.1
30°	330.3	343.0	361.0	393.0	424.4
32.5°	303.6	316.3	335.7	371.7	405.7
35°	275.6	288.9	310.3	349.7	386.4
37.5°	248.9	261.6	285.6	329.0	367.7
40°	221.5	234.9	261.6	308.3	347.0
42.5°	194.9	208.2	239.6	286.3	324.3
45°	168.2	180.8	217.5	264.2	300.3
47.5°	147.5	156.8	196.9	240.9	276.9
50°	134.1	137.5	176.2	218.2	251.6
52.5°	122.1	124.8	153.5	195.5	225.5
55°	110.8	113.4	134.1	172.2	198.9
57.5°	99.4	102.8	119.4	148.1	172.2
60°	88.8	92.8	107.4	126.8	143.5
62.5°	79.4	84.1	95.4	107.4	118.8
65°	70.1	76.1	83.4	88.8	95.4
67.5°	61.4	68.1	72.1	73.4	74.1
70°	53.4	60.1	61.4	61.4	61.4
72.5°	45.4	52.7	51.4	50.7	50.0
75°	38.0	44.0	42.7	40.7	40.0
77.5°	30.7	36.0	34.0	32.7	30.7
80°	24.0	28.0	26.0	24.7	22.7
82.5°	18.0	20.7	18.7	17.3	15.3
85°	11.3	14.0	12.7	10.7	8.7
87.5°	6.0	8.0	6.7	6.0	3.3
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	13.39	14.87	13.75	15.18	15.50	16.14	17.62	16.51	17.94	18.25
	3H	15.10	16.43	15.48	16.76	17.12	17.16	18.49	17.54	18.82	19.18
	4H	15.76	17.00	16.16	17.35	17.73	17.53	18.77	17.93	19.12	19.50
	6H	16.26	17.41	16.67	17.77	18.17	17.78	18.93	18.19	19.30	19.69
	8H	16.44	17.53	16.86	17.92	18.32	17.85	18.95	18.28	19.34	19.74
	12H	16.56	17.61	16.99	17.99	18.42	17.89	18.94	18.32	19.32	19.75
4H	2H	14.16	15.41	14.56	15.76	16.14	16.41	17.66	16.81	18.01	18.39
	3H	16.09	17.12	16.50	17.52	17.92	17.67	18.70	18.08	19.10	19.50
	4H	16.90	17.83	17.33	18.24	18.68	18.15	19.08	18.59	19.50	19.94
	6H	17.54	18.35	18.00	18.79	19.25	18.53	19.34	18.99	19.79	20.25
	8H	17.77	18.52	18.23	18.96	19.43	18.65	19.40	19.11	19.85	20.31
	12H	17.94	18.61	18.42	19.09	19.56	18.72	19.39	19.20	19.87	20.34
8H	4H	17.22	17.97	17.68	18.42	18.88	18.34	19.10	18.81	19.54	20.01
	6H	18.01	18.63	18.51	19.12	19.60	18.83	19.46	19.33	19.95	20.43
	8H	18.34	18.90	18.85	19.41	19.90	19.01	19.57	19.52	20.08	20.57
	12H	18.61	19.11	19.12	19.60	20.17	19.14	19.64	19.65	20.13	20.69
12H	4H	17.24	17.92	17.72	18.39	18.87	18.36	19.03	18.84	19.51	19.98
	6H	18.06	18.62	18.58	19.13	19.62	18.87	19.43	19.38	19.94	20.43
	8H	18.46	18.95	18.97	19.44	20.01	19.10	19.59	19.61	20.09	20.65