

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: P1059497

Luminaire Tested: S123RDR-H1165D830-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059497
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-H1165D830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

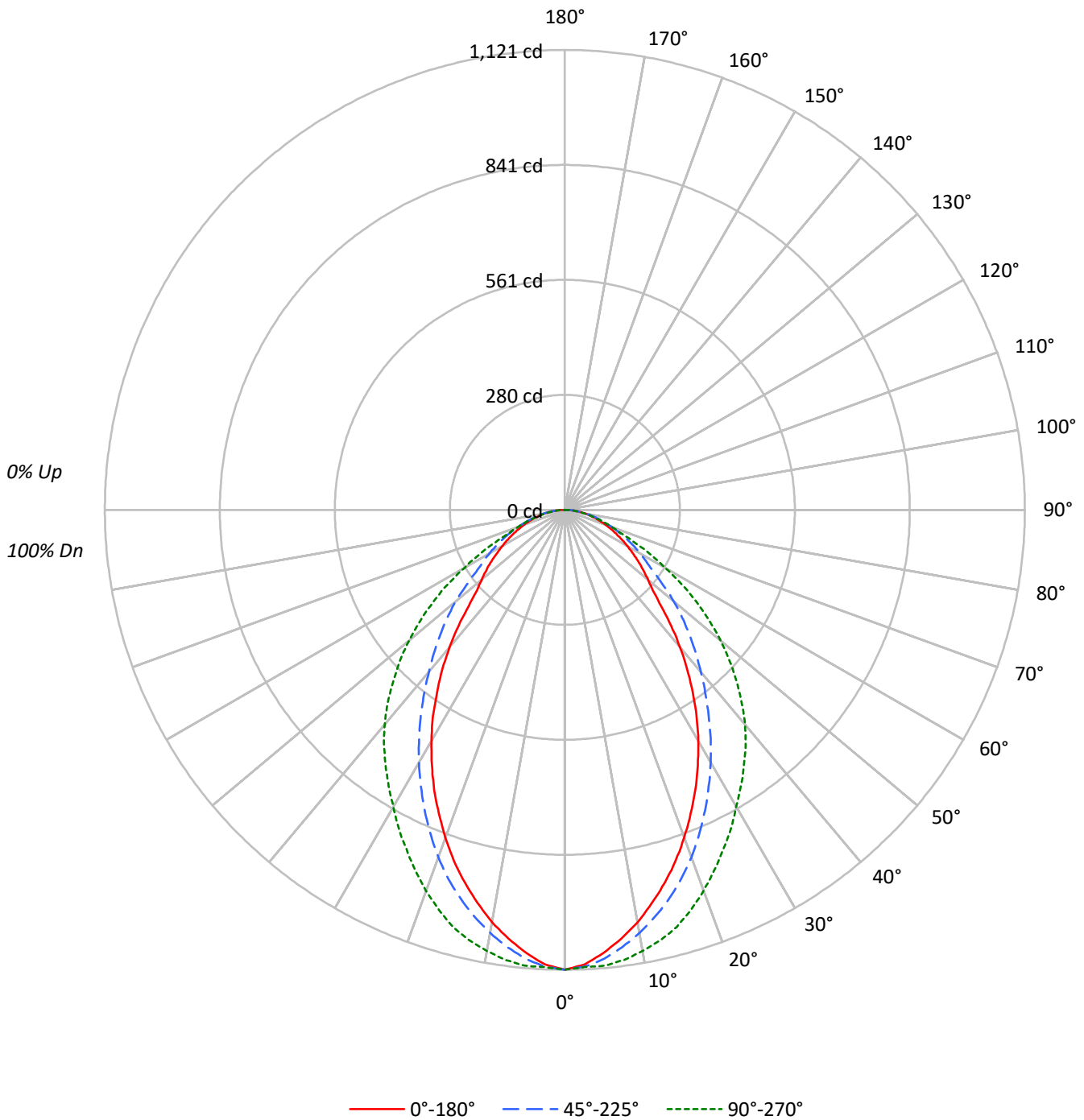
Lumens per Lamp: N/A
Luminaire Lumens: 2024.7 lumens
Efficiency: N/A
Efficacy: 55.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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										
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°	13162	13162	13162
5°	12779	12950	13150
10°	12174	12488	13021
15°	11438	11933	12796
20°	10624	11264	12349
25°	9756	10470	11833
30°	8820	9639	11331
35°	7780	8759	10906
40°	6688	7896	10474
45°	5498	7114	9819
50°	4825	6337	9050
55°	4465	5407	8017
60°	4105	4969	6634
65°	3834	4565	5221
70°	3608	4151	4151
75°	3398	3816	3575
80°	3199	3462	3023
85°	3004	3368	2304

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9819 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.7	5.1
10°-20°	277.8	13.7
20°-30°	376.7	18.6
30°-40°	393.9	19.5
40°-50°	341.6	16.9
50°-60°	254.1	12.6
60°-70°	163.1	8.1
70°-80°	87.5	4.3
80°-90°	26.4	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°	758.2	37.4
0°-40°	1152.1	56.9
0°-60°	1747.8	86.3
0°-90°	2024.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2024.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1121	1121	1121	1121	1121	
5°	1084	1102	1099	1106	1116	101
15°	941	963	982	1021	1053	264
25°	753	777	808	862	913	345
35°	543	569	611	689	761	339
45°	331	356	428	520	591	261
55°	218	223	264	339	392	195
65°	138	150	164	175	188	137
75°	75	87	84	80	79	79
85°	22	28	25	21	17	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1120.9	1120.9	1120.9	1120.9	1120.9
2.5°	1109.1	1124.8	1114.3	1114.3	1115.6
5°	1084.1	1102.5	1098.6	1106.4	1115.6
7.5°	1053.9	1073.6	1074.9	1093.3	1106.4
10°	1021.0	1040.7	1047.3	1073.6	1092.0
12.5°	981.6	1003.9	1015.8	1048.6	1074.9
15°	940.9	963.2	981.6	1021.0	1052.6
17.5°	897.5	919.8	943.5	988.2	1022.3
20°	850.2	873.9	901.4	946.1	988.2
22.5°	801.6	826.5	855.5	904.1	951.4
25°	753.0	776.6	808.1	862.0	913.3
27.5°	701.7	726.7	759.5	818.7	876.5
30°	650.5	675.4	710.9	774.0	835.7
32.5°	597.9	622.9	661.0	731.9	798.9
35°	542.7	569.0	611.0	688.6	760.8
37.5°	490.1	515.1	562.4	647.8	724.0
40°	436.3	462.5	515.1	607.1	683.3
42.5°	383.7	410.0	471.7	563.7	638.6
45°	331.1	356.1	428.4	520.4	591.3
47.5°	290.4	308.8	387.6	474.4	545.3
50°	264.1	270.7	346.9	429.7	495.4
52.5°	240.5	245.7	302.2	385.0	444.2
55°	218.1	223.4	264.1	339.0	391.6
57.5°	195.8	202.4	235.2	291.7	339.0
60°	174.8	182.7	211.6	249.7	282.5
62.5°	156.4	165.6	187.9	211.6	233.9
65°	138.0	149.8	164.3	174.8	187.9
67.5°	120.9	134.0	141.9	144.5	145.9
70°	105.1	118.3	120.9	120.9	120.9
72.5°	89.4	103.8	101.2	99.9	98.6
75°	74.9	86.7	84.1	80.2	78.8
77.5°	60.4	71.0	67.0	64.4	60.4
80°	47.3	55.2	51.2	48.6	44.7
82.5°	35.5	40.7	36.8	34.2	30.2
85°	22.3	27.6	25.0	21.0	17.1
87.5°	11.8	15.8	13.1	11.8	6.6
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	15.74	17.22	16.11	17.54	17.85	18.50	19.98	18.86	20.29	20.61
	3H	17.45	18.78	17.83	19.11	19.47	19.52	20.85	19.90	21.17	21.54
	4H	18.11	19.36	18.51	19.71	20.09	19.88	21.13	20.28	21.48	21.86
	6H	18.61	19.76	19.02	20.13	20.52	20.14	21.29	20.55	21.65	22.05
	8H	18.79	19.88	19.22	20.27	20.68	20.21	21.30	20.63	21.69	22.09
	12H	18.92	19.96	19.35	20.35	20.78	20.24	21.29	20.67	21.67	22.10
4H	2H	16.52	17.76	16.92	18.11	18.49	18.77	20.01	19.17	20.36	20.74
	3H	18.44	19.48	18.85	19.88	20.28	20.02	21.05	20.43	21.46	21.86
	4H	19.25	20.18	19.69	20.60	21.04	20.51	21.44	20.94	21.85	22.29
	6H	19.89	20.70	20.35	21.14	21.60	20.89	21.70	21.35	22.14	22.60
	8H	20.12	20.88	20.58	21.32	21.79	21.00	21.76	21.47	22.20	22.67
	12H	20.29	20.97	20.78	21.45	21.92	21.07	21.75	21.55	22.23	22.70
8H	4H	19.57	20.33	20.04	20.77	21.24	20.70	21.46	21.16	21.90	22.37
	6H	20.36	20.99	20.86	21.48	21.96	21.19	21.81	21.69	22.30	22.78
	8H	20.69	21.25	21.21	21.76	22.25	21.36	21.92	21.88	22.44	22.92
	12H	20.97	21.46	21.48	21.96	22.52	21.50	21.99	22.01	22.49	23.05
12H	4H	19.60	20.27	20.08	20.75	21.22	20.72	21.39	21.20	21.87	22.34
	6H	20.42	20.98	20.93	21.49	21.98	21.22	21.79	21.74	22.30	22.79
	8H	20.81	21.31	21.32	21.80	22.37	21.45	21.95	21.97	22.44	23.01