

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: P1059542

Luminaire Tested: S123RDR-H1165D930-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059542
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-H1165D930-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, 90 CRI LEDS
Ballast/Driver: -

Summary

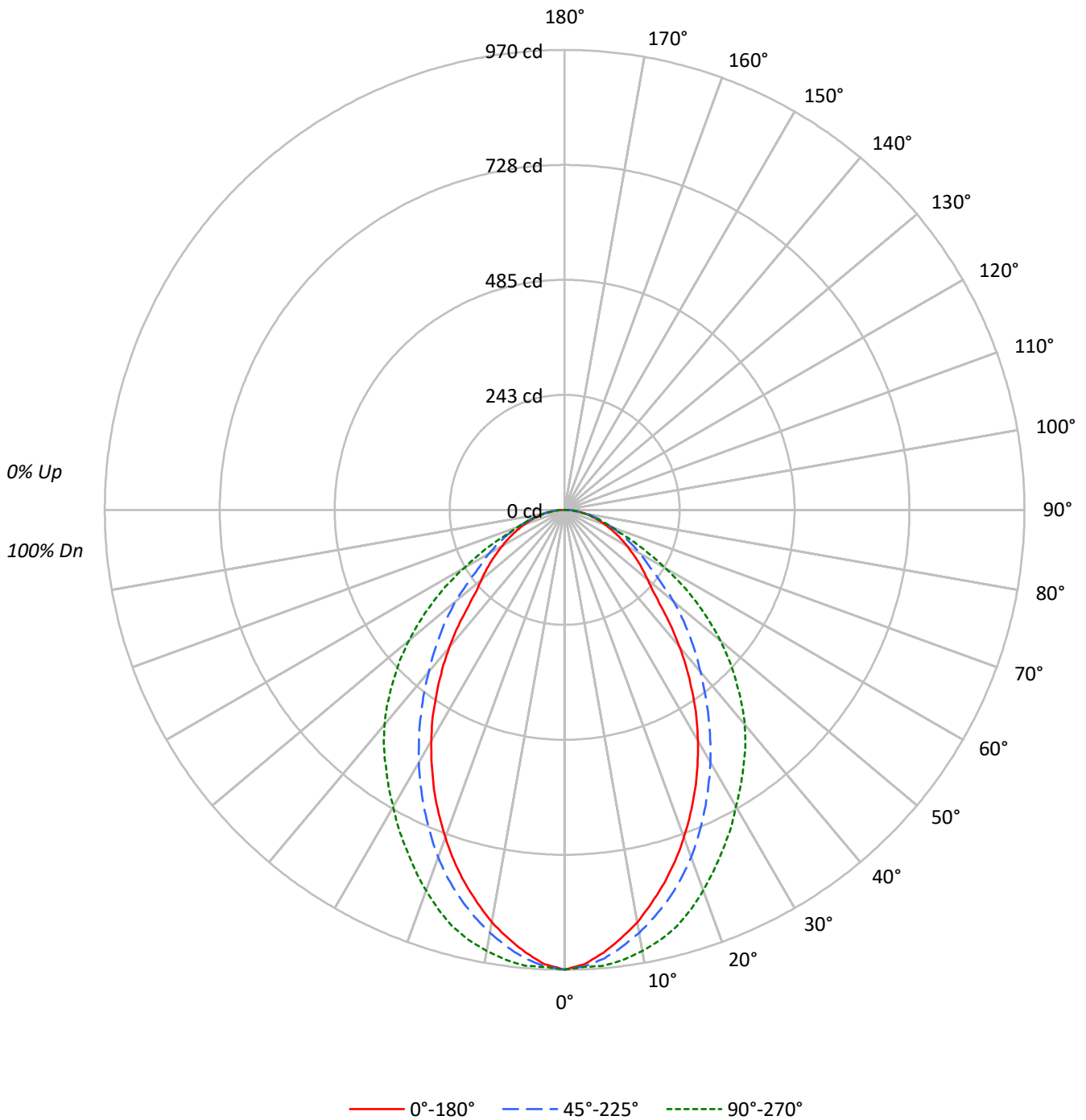
Lumens per Lamp: N/A
Luminaire Lumens: 1751.4 lumens
Efficiency: N/A
Efficacy: 48.0 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059542

CATALOG NUMBER: S123RDR-H1165D930-X4F0-XX-UDD-WVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1059542

CATALOG NUMBER: S123RDR-H1165D930-X4F0-XX-UDD-WVL-S

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	0																	
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																				
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87																				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75																				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65																				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57																				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51																				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45																				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41																				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37																				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34																				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11385	11385	11385
5°	11053	11200	11375
10°	10531	10802	11263
15°	9894	10322	11069
20°	9190	9744	10682
25°	8438	9056	10236
30°	7628	8337	9802
35°	6729	7576	9434
40°	5785	6830	9061
45°	4756	6154	8494
50°	4174	5482	7828
55°	3863	4678	6934
60°	3551	4298	5740
65°	3315	3948	4515
70°	3121	3591	3591
75°	2940	3298	3094
80°	2766	2996	2610
85°	2600	2910	1994

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8494 cd/sqm



TEST NUMBER: P1059542

CATALOG NUMBER: S123RDR-H1165D930-X4F0-XX-UDD-WVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	5.1
10°-20°	240.3	13.7
20°-30°	325.9	18.6
30°-40°	340.7	19.5
40°-50°	295.5	16.9
50°-60°	219.8	12.6
60°-70°	141.0	8.1
70°-80°	75.6	4.3
80°-90°	22.8	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°	655.9	37.4
0°-40°	996.6	56.9
0°-60°	1511.9	86.3
0°-90°	1751.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1751.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	970	970	970	970	970	
5°	938	954	950	957	965	88
15°	814	833	849	883	910	228
25°	651	672	699	746	790	299
35°	469	492	528	596	658	293
45°	286	308	371	450	512	225
55°	189	193	228	293	339	169
65°	119	130	142	151	162	119
75°	65	75	73	69	68	69
85°	19	24	22	18	15	22
90°	0	0	0	0	0	



TEST NUMBER: P1059542

CATALOG NUMBER: S123RDR-H1165D930-X4F0-XX-UDD-WVL-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	969.6	969.6	969.6	969.6	969.6
2.5°	959.3	973.0	963.9	963.9	965.0
5°	937.7	953.7	950.2	957.1	965.0
7.5°	911.6	928.7	929.8	945.7	957.1
10°	883.2	900.2	905.9	928.7	944.6
12.5°	849.1	868.4	878.6	907.1	929.8
15°	813.9	833.2	849.1	883.2	910.5
17.5°	776.3	795.7	816.1	854.8	884.3
20°	735.4	755.9	779.8	818.4	854.8
22.5°	693.4	715.0	740.0	782.0	822.9
25°	651.3	671.8	699.0	745.7	790.0
27.5°	607.0	628.6	657.0	708.1	758.2
30°	562.6	584.2	614.9	669.5	722.9
32.5°	517.2	538.8	571.7	633.1	691.1
35°	469.4	492.2	528.5	595.6	658.1
37.5°	424.0	445.6	486.5	560.4	626.3
40°	377.4	400.1	445.6	525.1	591.1
42.5°	331.9	354.6	408.1	487.6	552.4
45°	286.4	308.0	370.6	450.1	511.5
47.5°	251.2	267.1	335.3	410.3	471.7
50°	228.5	234.2	300.1	371.7	428.5
52.5°	208.0	212.6	261.4	333.0	384.2
55°	188.7	193.2	228.5	293.3	338.7
57.5°	169.4	175.0	203.5	252.3	293.3
60°	151.2	158.0	183.0	216.0	244.4
62.5°	135.3	143.2	162.5	183.0	202.3
65°	119.3	129.6	142.1	151.2	162.5
67.5°	104.6	115.9	122.8	125.0	126.2
70°	90.9	102.3	104.6	104.6	104.6
72.5°	77.3	89.8	87.5	86.4	85.2
75°	64.8	75.0	72.7	69.3	68.2
77.5°	52.3	61.4	58.0	55.7	52.3
80°	40.9	47.7	44.3	42.1	38.6
82.5°	30.7	35.2	31.8	29.6	26.1
85°	19.3	23.9	21.6	18.2	14.8
87.5°	10.2	13.6	11.4	10.2	5.7
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059542
 CATALOG NUMBER: S123RDR-H1165D930-X4F0-XX-UDD-WVL-S

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	15.24	16.72	15.60	17.03	17.35	17.99	19.48	18.36	19.79	20.10
	3H	16.95	18.27	17.32	18.60	18.97	19.01	20.34	19.39	20.67	21.03
	4H	17.61	18.85	18.01	19.20	19.58	19.38	20.62	19.78	20.97	21.35
	6H	18.11	19.26	18.52	19.62	20.02	19.63	20.78	20.05	21.15	21.54
	8H	18.29	19.38	18.71	19.77	20.17	19.70	20.80	20.13	21.19	21.59
	12H	18.41	19.46	18.84	19.84	20.27	19.74	20.79	20.17	21.17	21.60
4H	2H	16.01	17.26	16.41	17.61	17.99	18.26	19.51	18.66	19.86	20.24
	3H	17.94	18.97	18.35	19.37	19.77	19.52	20.55	19.93	20.95	21.35
	4H	18.75	19.68	19.18	20.09	20.53	20.00	20.93	20.44	21.35	21.79
	6H	19.39	20.20	19.85	20.64	21.10	20.39	21.19	20.84	21.64	22.10
	8H	19.62	20.37	20.08	20.82	21.28	20.50	21.25	20.96	21.70	22.16
	12H	19.79	20.46	20.27	20.94	21.41	20.57	21.24	21.05	21.72	22.19
8H	4H	19.07	19.82	19.53	20.27	20.73	20.20	20.95	20.66	21.40	21.86
	6H	19.86	20.48	20.36	20.98	21.45	20.68	21.31	21.18	21.80	22.28
	8H	20.19	20.75	20.70	21.26	21.75	20.86	21.42	21.38	21.93	22.42
	12H	20.46	20.96	20.97	21.45	22.02	20.99	21.49	21.50	21.98	22.55
12H	4H	19.09	19.77	19.57	20.24	20.72	20.21	20.89	20.69	21.36	21.84
	6H	19.91	20.47	20.43	20.99	21.47	20.72	21.28	21.24	21.79	22.28
	8H	20.31	20.80	20.82	21.30	21.86	20.95	21.45	21.46	21.94	22.50