

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: P1059110

Luminaire Tested: S123RDRP-S1165D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059110  
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-S1165D840-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: -

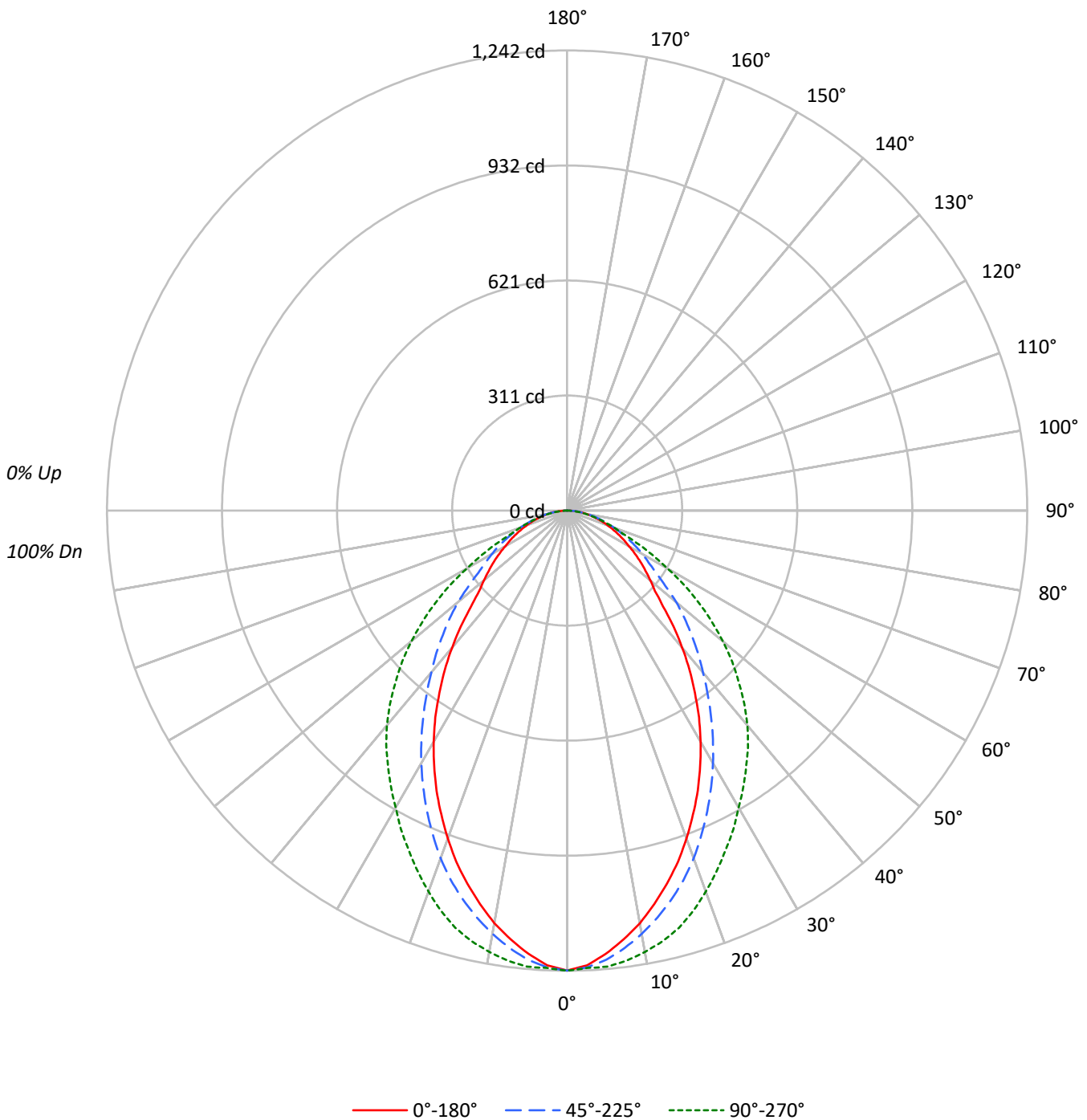
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2242.6 lumens  
Efficiency: N/A  
Efficacy: 53.7 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): 41.8  
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

TEST NUMBER: P1059110

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-WVL-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1059110

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-WVL-S

**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	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°	14578	14578	14578
5°	14154	14343	14566
10°	13484	13831	14422
15°	12668	13217	14172
20°	11768	12477	13677
25°	10806	11597	13107
30°	9769	10676	12552
35°	8617	9702	12080
40°	7407	8745	11601
45°	6091	7880	10877
50°	5343	7019	10024
55°	4946	5988	8879
60°	4547	5503	7348
65°	4246	5054	5782
70°	3996	4597	4597
75°	3766	4228	3961
80°	3543	3841	3347
85°	3328	3732	2546

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10877 cd/sqm



TEST NUMBER: P1059110

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-WVL-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.8	5.1
10°-20°	307.7	13.7
20°-30°	417.3	18.6
30°-40°	436.2	19.5
40°-50°	378.4	16.9
50°-60°	281.5	12.6
60°-70°	180.6	8.1
70°-80°	96.9	4.3
80°-90°	29.3	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°	839.8	37.4
0°-40°	1276.1	56.9
0°-60°	1935.9	86.3
0°-90°	2242.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2242.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1201	1221	1217	1226	1236	112
15°	1042	1067	1087	1131	1166	292
25°	834	860	895	955	1012	382
35°	601	630	677	763	843	375
45°	367	394	474	576	655	289
55°	242	247	292	376	434	216
65°	153	166	182	194	208	152
75°	83	96	93	89	87	88
85°	25	31	28	23	19	28
90°	0	0	0	0	0	



TEST NUMBER: P1059110

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-WVL-S

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1241.5	1241.5	1241.5	1241.5	1241.5
2.5°	1228.4	1245.9	1234.2	1234.2	1235.7
5°	1200.8	1221.1	1216.8	1225.5	1235.7
7.5°	1167.3	1189.1	1190.6	1211.0	1225.5
10°	1130.9	1152.7	1160.0	1189.1	1209.5
12.5°	1087.2	1112.0	1125.1	1161.5	1190.6
15°	1042.1	1066.9	1087.2	1130.9	1165.8
17.5°	994.1	1018.8	1045.0	1094.5	1132.4
20°	941.7	967.9	998.5	1047.9	1094.5
22.5°	887.8	915.5	947.5	1001.4	1053.8
25°	834.0	860.2	895.1	954.8	1011.6
27.5°	777.2	804.9	841.3	906.8	970.8
30°	720.5	748.1	787.4	857.3	925.7
32.5°	662.2	689.9	732.1	810.7	884.9
35°	601.1	630.2	676.8	762.7	842.7
37.5°	542.9	570.5	622.9	717.5	802.0
40°	483.2	512.3	570.5	672.4	756.8
42.5°	425.0	454.1	522.5	624.4	707.4
45°	366.8	394.4	474.5	576.4	655.0
47.5°	321.7	342.0	429.4	525.4	604.0
50°	292.5	299.8	384.2	475.9	548.7
52.5°	266.4	272.2	334.8	426.5	491.9
55°	241.6	247.4	292.5	375.5	433.7
57.5°	216.9	224.1	260.5	323.1	375.5
60°	193.6	202.3	234.3	276.5	312.9
62.5°	173.2	183.4	208.1	234.3	259.1
65°	152.8	165.9	181.9	193.6	208.1
67.5°	133.9	148.5	157.2	160.1	161.6
70°	116.4	131.0	133.9	133.9	133.9
72.5°	99.0	115.0	112.1	110.6	109.2
75°	83.0	96.1	93.2	88.8	87.3
77.5°	67.0	78.6	74.2	71.3	67.0
80°	52.4	61.1	56.8	53.9	49.5
82.5°	39.3	45.1	40.8	37.8	33.5
85°	24.7	30.6	27.7	23.3	18.9
87.5°	13.1	17.5	14.6	13.1	7.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059110  
 CATALOG NUMBER: S123RDRP-S1165D840-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	16.09	17.58	16.46	17.89	18.21	18.85	20.33	19.22	20.65	20.96
	3H	17.81	19.13	18.18	19.46	19.82	19.87	21.20	20.25	21.53	21.89
	4H	18.47	19.71	18.87	20.06	20.44	20.24	21.48	20.64	21.83	22.21
	6H	18.97	20.12	19.38	20.48	20.88	20.49	21.64	20.91	22.01	22.40
	8H	19.15	20.24	19.57	20.63	21.03	20.56	21.66	20.99	22.05	22.45
	12H	19.27	20.32	19.70	20.70	21.13	20.60	21.65	21.03	22.03	22.46
4H	2H	16.87	18.12	17.27	18.46	18.84	19.12	20.37	19.52	20.72	21.10
	3H	18.80	19.83	19.21	20.23	20.63	20.38	21.41	20.79	21.81	22.21
	4H	19.61	20.54	20.04	20.95	21.39	20.86	21.79	21.30	22.21	22.65
	6H	20.25	21.06	20.71	21.50	21.96	21.24	22.05	21.70	22.50	22.96
	8H	20.48	21.23	20.94	21.68	22.14	21.36	22.11	21.82	22.56	23.02
	12H	20.65	21.32	21.13	21.80	22.27	21.43	22.10	21.91	22.58	23.05
8H	4H	19.93	20.68	20.39	21.13	21.59	21.06	21.81	21.52	22.26	22.72
	6H	20.72	21.34	21.22	21.84	22.31	21.54	22.17	22.04	22.66	23.14
	8H	21.05	21.61	21.56	22.12	22.61	21.72	22.28	22.23	22.79	23.28
	12H	21.32	21.82	21.83	22.31	22.88	21.85	22.35	22.36	22.84	23.41
12H	4H	19.95	20.63	20.43	21.10	21.58	21.07	21.74	21.55	22.22	22.70
	6H	20.77	21.33	21.29	21.85	22.33	21.58	22.14	22.10	22.65	23.14
	8H	21.17	21.66	21.68	22.16	22.72	21.81	22.31	22.32	22.80	23.36