

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: P1059554

Luminaire Tested: S123RDR-H1165D940-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059554
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D940-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

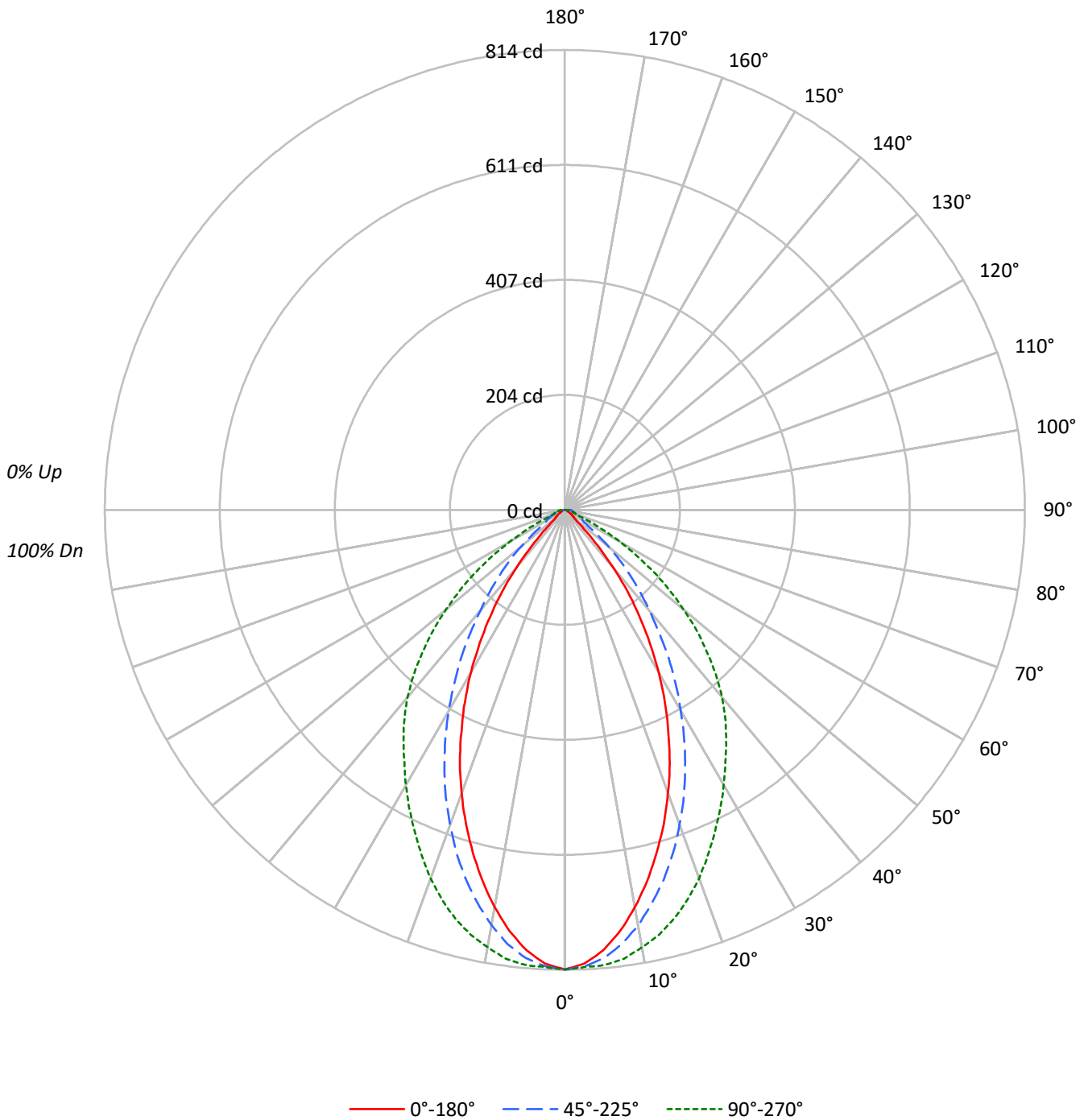
Lumens per Lamp: N/A
Luminaire Lumens: 977.3 lumens
Efficiency: N/A
Efficacy: 26.8 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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: P1059554

CATALOG NUMBER: S123RDR-H1165D940-X4F0-XX-UDD-BVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1059554

CATALOG NUMBER: S123RDR-H1165D940-X4F0-XX-UDD-BVL-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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9554	9554	9554
5°	9224	9385	9531
10°	8515	8900	9374
15°	7637	8228	9104
20°	6669	7415	8675
25°	5609	6527	8139
30°	4504	5566	7624
35°	3298	4583	7133
40°	2040	3565	6636
45°	785	2685	5909
50°	385	1841	5000
55°	305	1020	3922
60°	204	848	2630
65°	172	761	1175
70°	172	683	683
75°	227	735	676
80°	338	926	757
85°	498	1509	1010

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5909 cd/sqm



TEST NUMBER: P1059554

CATALOG NUMBER: S123RDR-H1165D940-X4F0-XX-UDD-BVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.6	7.6
10°-20°	191.0	19.5
20°-30°	237.0	24.3
30°-40°	212.3	21.7
40°-50°	139.6	14.3
50°-60°	69.9	7.2
60°-70°	27.6	2.8
70°-80°	15.5	1.6
80°-90°	9.7	1.0
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°	502.6	51.4
0°-40°	715.0	73.2
0°-60°	924.5	94.6
0°-90°	977.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	977.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	782	795	796	801	809	73
15°	628	648	677	723	749	175
25°	433	460	504	575	628	198
35°	230	261	320	418	498	143
45°	47	78	162	272	356	45
55°	15	17	50	134	192	13
65°	6	17	27	35	42	6
75°	5	16	16	15	15	5
85°	4	11	11	11	8	4
90°	0	0	0	0	0	



TEST NUMBER: P1059554

CATALOG NUMBER: S123RDR-H1165D940-X4F0-XX-UDD-BVL-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	813.6	813.6	813.6	813.6	813.6
2.5°	803.6	814.8	808.6	808.6	809.9
5°	782.5	794.9	796.2	801.2	808.6
7.5°	751.4	767.6	775.0	790.0	801.2
10°	714.1	731.5	746.4	772.5	786.2
12.5°	673.0	690.4	712.8	748.9	770.1
15°	628.2	648.1	676.8	722.8	748.9
17.5°	582.2	602.1	636.9	689.2	722.8
20°	533.7	556.1	593.4	653.1	694.2
22.5°	485.2	510.1	549.9	614.6	661.8
25°	432.9	460.3	503.8	574.7	628.2
27.5°	383.2	411.8	457.8	534.9	595.9
30°	332.2	360.8	410.5	493.9	562.3
32.5°	279.9	312.3	364.5	455.3	528.7
35°	230.1	261.2	319.7	418.0	497.6
37.5°	181.6	212.7	273.7	381.9	466.5
40°	133.1	165.5	232.6	347.1	432.9
42.5°	87.1	120.7	196.6	312.3	395.6
45°	47.3	78.4	161.7	272.4	355.8
47.5°	26.1	42.3	130.6	235.1	317.2
50°	21.1	23.6	100.8	200.3	273.7
52.5°	17.4	19.9	72.2	166.7	233.9
55°	14.9	17.4	49.8	134.4	191.6
57.5°	12.4	14.9	39.8	103.3	150.5
60°	8.7	14.9	36.1	75.9	112.0
62.5°	7.5	14.9	31.1	52.2	74.6
65°	6.2	17.4	27.4	34.8	42.3
67.5°	5.0	17.4	23.6	22.4	22.4
70°	5.0	17.4	19.9	18.7	19.9
72.5°	5.0	18.7	18.7	17.4	17.4
75°	5.0	16.2	16.2	14.9	14.9
77.5°	5.0	14.9	14.9	13.7	13.7
80°	5.0	13.7	13.7	12.4	11.2
82.5°	5.0	12.4	12.4	11.2	10.0
85°	3.7	11.2	11.2	11.2	7.5
87.5°	3.7	10.0	11.2	10.0	6.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059554
 CATALOG NUMBER: S123RDR-H1165D940-X4F0-XX-UDD-BVL-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	0.28	1.54	0.65	1.85	2.17	14.39	15.65	14.75	15.96	16.27
	3H	2.82	3.93	3.20	4.26	4.63	14.47	15.58	14.85	15.91	16.28
	4H	3.99	5.03	4.40	5.38	5.76	14.53	15.57	14.94	15.92	16.30
	6H	5.05	6.00	5.46	6.37	6.76	14.63	15.58	15.05	15.95	16.35
	8H	5.59	6.49	6.02	6.88	7.28	14.69	15.59	15.12	15.98	16.39
	12H	6.06	6.92	6.50	7.31	7.74	14.76	15.62	15.19	16.00	16.43
4H	2H	3.56	4.60	3.96	4.95	5.33	14.25	15.29	14.65	15.64	16.02
	3H	6.02	6.87	6.44	7.28	7.68	14.42	15.27	14.84	15.68	16.08
	4H	7.37	8.13	7.81	8.55	8.99	14.55	15.31	14.99	15.73	16.17
	6H	8.51	9.16	8.97	9.61	10.07	14.77	15.42	15.23	15.87	16.34
	8H	9.01	9.63	9.49	10.07	10.55	14.89	15.50	15.36	15.95	16.42
	12H	9.47	10.01	9.96	10.49	10.97	15.05	15.59	15.54	16.08	16.55
8H	4H	8.29	8.90	8.76	9.35	9.82	14.55	15.17	15.02	15.61	16.08
	6H	9.89	10.39	10.39	10.89	11.37	14.88	15.38	15.39	15.88	16.36
	8H	10.71	11.16	11.23	11.68	12.17	15.11	15.56	15.64	16.08	16.57
	12H	11.49	11.89	12.00	12.38	12.96	15.44	15.84	15.96	16.33	16.91
12H	4H	8.46	9.00	8.94	9.48	9.95	14.54	15.08	15.03	15.57	16.04
	6H	10.20	10.65	10.73	11.17	11.66	14.91	15.37	15.44	15.88	16.37
	8H	11.21	11.61	11.72	12.10	12.67	15.22	15.62	15.74	16.12	16.69