

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: P1059513

Luminaire Tested: S123RDR-H1165D840-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059513
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D840-X4F0-XX-UDD-SVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

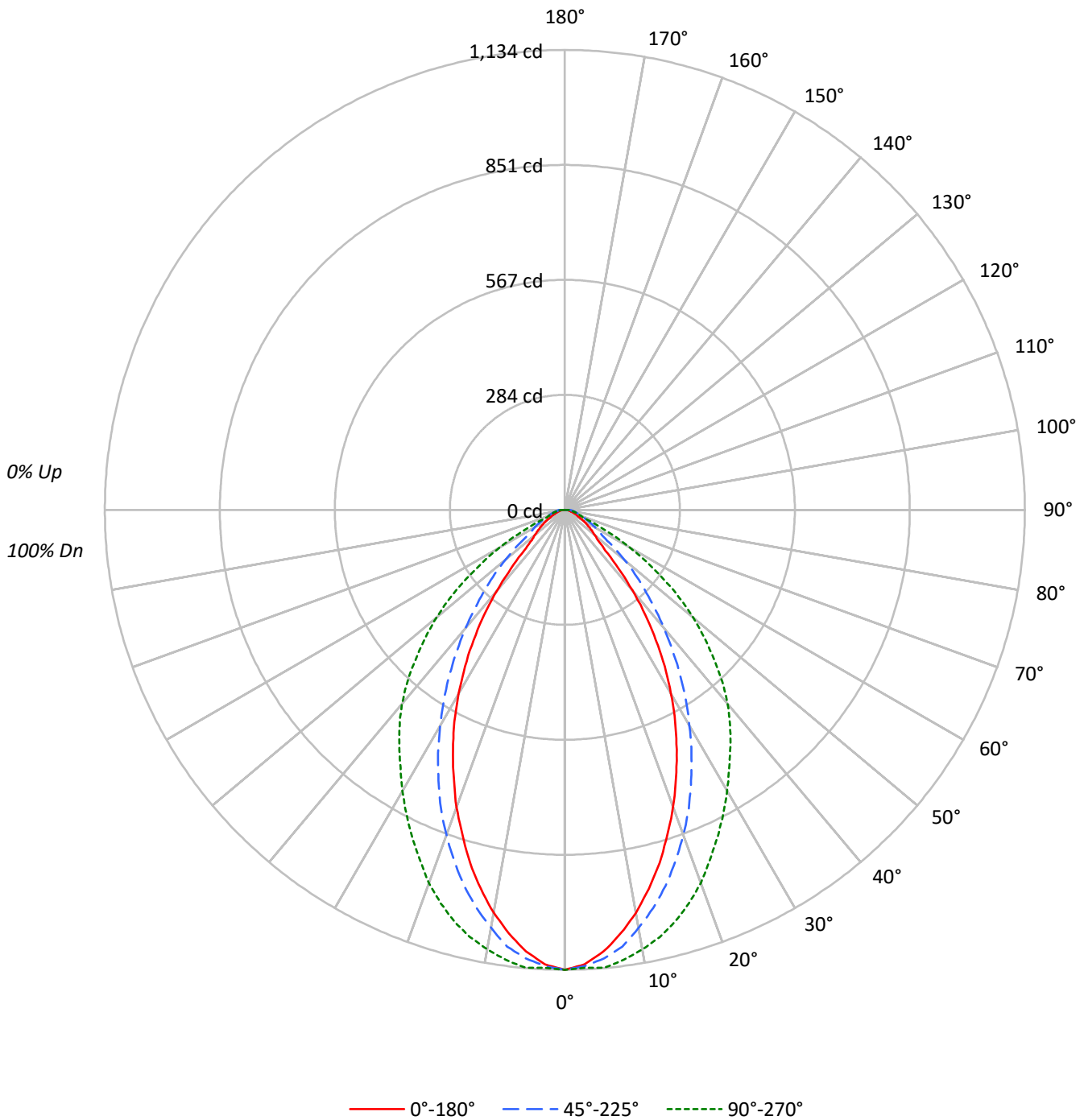
Lumens per Lamp: N/A
Luminaire Lumens: 1522.5 lumens
Efficiency: N/A
Efficacy: 41.7 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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: P1059513

CATALOG NUMBER: S123RDR-H1165D840-X4F0-XX-UDD-SVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1059513

CATALOG NUMBER: S123RDR-H1165D840-X4F0-XX-UDD-SVL-W

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				100
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13318	13318	13318
5°	12887	13086	13353
10°	12029	12482	13121
15°	10962	11664	12778
20°	9753	10669	12236
25°	8451	9548	11536
30°	7087	8329	10851
35°	5615	7089	10199
40°	3973	5831	9568
45°	2340	4610	8610
50°	1750	3500	7541
55°	1472	2365	6058
60°	1191	2017	4302
65°	939	1723	2270
70°	824	1500	1404
75°	767	1406	1343
80°	764	1521	1332
85°	943	2277	1711

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8610 cd/sqm



TEST NUMBER: P1059513

CATALOG NUMBER: S123RDR-H1165D840-X4F0-XX-UDD-SVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	6.9
10°-20°	271.3	17.8
20°-30°	345.5	22.7
30°-40°	325.0	21.3
40°-50°	234.0	15.4
50°-60°	135.2	8.9
60°-70°	61.8	4.1
70°-80°	30.9	2.0
80°-90°	14.6	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°	721.1	47.4
0°-40°	1046.1	68.7
0°-60°	1415.3	93.0
0°-90°	1522.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1522.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1093	1112	1110	1122	1133	102
15°	902	934	960	1013	1051	251
25°	652	686	737	819	890	298
35°	392	426	494	609	712	243
45°	141	176	278	417	518	119
55°	72	75	116	220	296	64
65°	34	48	62	69	82	35
75°	17	32	31	30	30	18
85°	7	16	17	16	13	8
90°	0	0	0	0	0	



TEST NUMBER: P1059513

CATALOG NUMBER: S123RDR-H1165D840-X4F0-XX-UDD-SVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1134.2	1134.2	1134.2	1134.2	1134.2
2.5°	1121.5	1135.6	1125.7	1127.1	1130.0
5°	1093.3	1111.6	1110.2	1121.5	1132.8
7.5°	1053.9	1075.0	1086.3	1103.2	1118.7
10°	1008.8	1032.7	1046.8	1077.8	1100.4
12.5°	956.7	987.7	1006.0	1046.8	1079.2
15°	901.7	934.1	959.5	1013.0	1051.1
17.5°	839.7	874.9	907.3	970.8	1017.2
20°	780.5	814.4	853.8	922.8	979.2
22.5°	715.7	752.4	797.5	870.7	934.1
25°	652.3	686.1	736.9	818.6	890.4
27.5°	588.9	622.7	676.3	766.5	845.4
30°	522.7	557.9	614.3	714.3	800.3
32.5°	457.9	491.7	555.1	663.6	753.8
35°	391.7	425.5	494.5	608.7	711.5
37.5°	326.9	362.1	435.4	563.6	669.2
40°	259.2	297.3	380.4	517.1	624.2
42.5°	195.8	236.7	325.5	469.2	574.8
45°	140.9	176.1	277.6	417.0	518.5
47.5°	109.9	128.2	233.9	363.5	466.4
50°	95.8	98.6	191.6	314.2	412.8
52.5°	83.1	85.9	150.8	267.7	356.5
55°	71.9	74.7	115.5	219.8	295.9
57.5°	60.6	64.8	95.8	174.7	238.1
60°	50.7	56.4	85.9	133.8	183.2
62.5°	40.9	50.7	73.3	98.6	131.0
65°	33.8	47.9	62.0	69.0	81.7
67.5°	28.2	43.7	52.1	49.3	47.9
70°	24.0	39.4	43.7	39.4	40.9
72.5°	19.7	36.6	36.6	33.8	33.8
75°	16.9	32.4	31.0	29.6	29.6
77.5°	14.1	28.2	26.8	25.4	24.0
80°	11.3	22.5	22.5	21.1	19.7
82.5°	9.9	18.3	18.3	18.3	15.5
85°	7.0	15.5	16.9	15.5	12.7
87.5°	5.6	14.1	14.1	12.7	8.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059513
 CATALOG NUMBER: S123RDR-H1165D840-X4F0-XX-UDD-SVL-W

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	8.97	10.28	9.33	10.60	10.91	16.33	17.65	16.69	17.96	18.28
	3H	10.36	11.53	10.74	11.86	12.22	16.56	17.73	16.94	18.06	18.42
	4H	10.91	12.00	11.31	12.35	12.73	16.67	17.76	17.08	18.12	18.50
	6H	11.34	12.34	11.76	12.72	13.11	16.79	17.79	17.20	18.16	18.56
	8H	11.52	12.47	11.95	12.86	13.27	16.84	17.79	17.27	18.18	18.59
	12H	11.68	12.58	12.11	12.97	13.40	16.90	17.81	17.33	18.19	18.62
4H	2H	10.07	11.16	10.47	11.51	11.89	16.29	17.38	16.69	17.73	18.11
	3H	11.73	12.62	12.14	13.03	13.43	16.65	17.54	17.06	17.94	18.35
	4H	12.54	13.34	12.97	13.76	14.20	16.84	17.64	17.28	18.06	18.51
	6H	13.17	13.87	13.64	14.31	14.78	17.07	17.76	17.53	18.21	18.68
	8H	13.41	14.06	13.88	14.50	14.97	17.18	17.82	17.64	18.27	18.74
	12H	13.62	14.19	14.11	14.68	15.15	17.30	17.88	17.79	18.36	18.83
8H	4H	12.98	13.63	13.45	14.07	14.54	16.88	17.53	17.35	17.97	18.45
	6H	13.89	14.42	14.39	14.92	15.40	17.21	17.74	17.71	18.24	18.72
	8H	14.31	14.79	14.83	15.30	15.79	17.40	17.88	17.92	18.39	18.88
	12H	14.73	15.15	15.24	15.64	16.21	17.65	18.07	18.16	18.57	19.14
12H	4H	13.04	13.61	13.52	14.09	14.57	16.87	17.44	17.36	17.93	18.40
	6H	14.02	14.50	14.55	15.02	15.51	17.23	17.70	17.75	18.22	18.71
	8H	14.56	14.99	15.08	15.48	16.05	17.48	17.90	18.00	18.40	18.97