

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: P1059411

Luminaire Tested: S123RDR-H1000D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059411
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D830-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

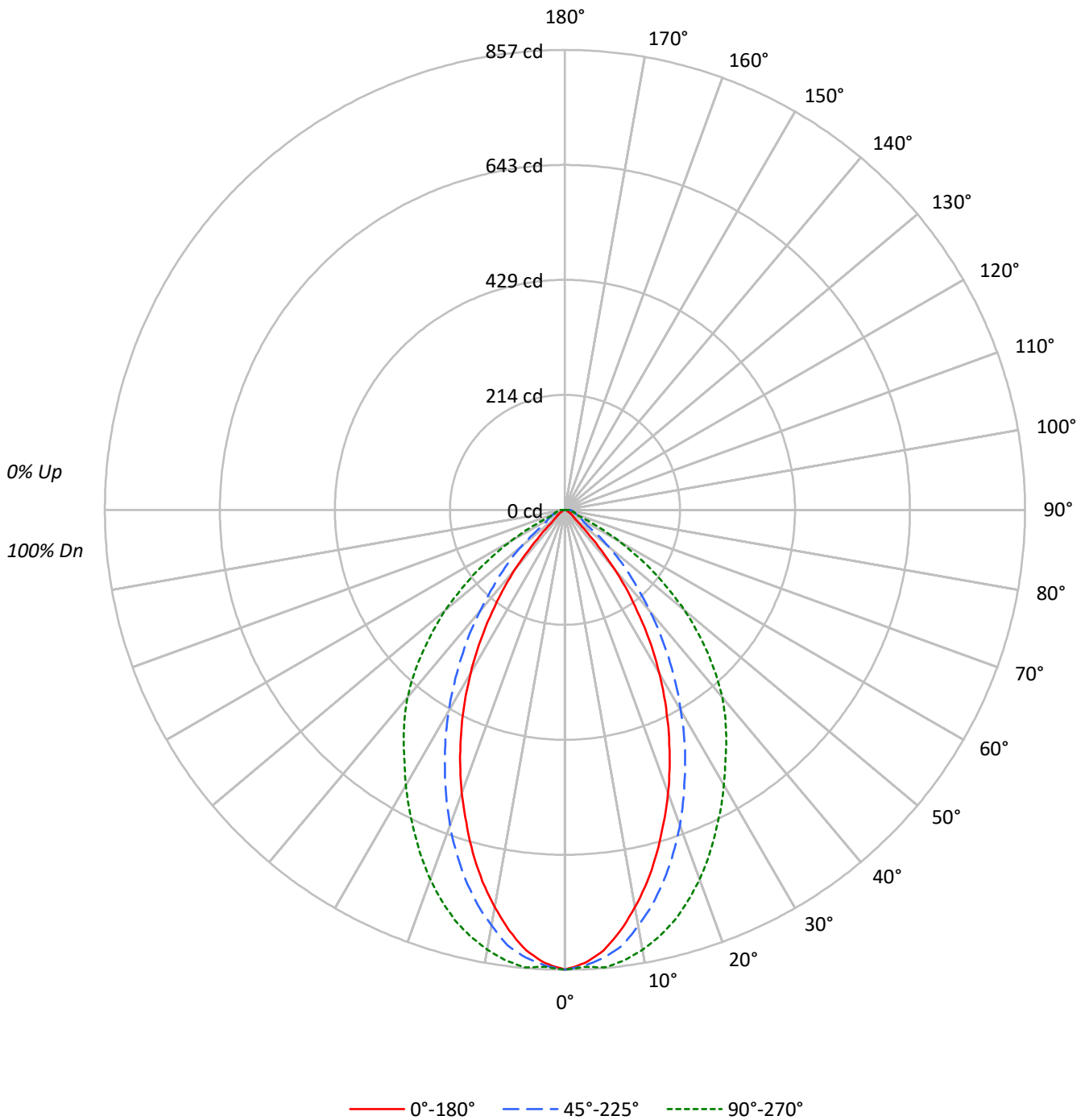
Lumens per Lamp: N/A
Luminaire Lumens: 1028.7 lumens
Efficiency: N/A
Efficacy: 33.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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: P1059411

CATALOG NUMBER: S123RDR-H1000D830-X4F0-XX-UDD-BVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1059411

CATALOG NUMBER: S123RDR-H1000D830-X4F0-XX-UDD-BVL-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				
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	69	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	65	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47				
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	42	40				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10061	10061	10061
5°	9715	9874	10086
10°	8968	9384	9922
15°	8049	8677	9622
20°	7020	7823	9160
25°	5922	6856	8593
30°	4763	5863	8030
35°	3486	4827	7506
40°	2175	3763	6990
45°	822	2805	6226
50°	391	1933	5307
55°	299	1060	4103
60°	211	899	2696
65°	156	781	1125
70°	154	735	735
75°	204	767	767
80°	304	913	839
85°	606	1522	1213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6226 cd/sqm



TEST NUMBER: P1059411

CATALOG NUMBER: S123RDR-H1000D830-X4F0-XX-UDD-BVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.7	7.6
10°-20°	201.7	19.6
20°-30°	249.7	24.3
30°-40°	223.8	21.8
40°-50°	146.7	14.3
50°-60°	73.4	7.1
60°-70°	28.6	2.8
70°-80°	16.1	1.6
80°-90°	10.0	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°	530.0	51.5
0°-40°	753.8	73.3
0°-60°	974.0	94.7
0°-90°	1028.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1028.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	824	838	838	847	856	76
15°	662	689	714	761	792	184
25°	457	485	529	605	663	209
35°	243	276	337	438	524	151
45°	50	80	169	289	375	47
55°	15	18	52	142	200	13
65°	6	17	28	37	40	6
75°	4	17	17	17	17	5
85°	4	11	11	11	9	4
90°	0	0	0	0	0	



TEST NUMBER: P1059411

CATALOG NUMBER: S123RDR-H1000D830-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	856.8	856.8	856.8	856.8	856.8
2.5°	845.6	858.0	850.1	851.2	852.3
5°	824.2	837.7	837.7	846.7	855.7
7.5°	791.5	807.3	818.6	834.3	846.7
10°	752.1	771.3	787.0	815.2	832.1
12.5°	709.3	733.0	753.3	790.4	814.1
15°	662.1	689.1	713.8	761.1	791.5
17.5°	611.4	638.4	671.1	726.2	763.4
20°	561.8	588.9	626.0	688.0	733.0
22.5°	510.1	538.2	577.6	646.3	699.2
25°	457.1	485.3	529.2	604.6	663.2
27.5°	404.2	432.4	481.9	564.1	628.3
30°	351.3	379.4	432.4	520.2	592.2
32.5°	298.4	328.8	383.9	479.7	556.2
35°	243.2	275.9	336.7	438.0	523.6
37.5°	192.5	222.9	291.6	402.0	490.9
40°	141.9	174.5	245.5	367.1	456.0
42.5°	92.3	127.2	203.8	328.8	416.6
45°	49.5	79.9	168.9	289.4	374.9
47.5°	27.0	43.9	136.2	247.7	332.2
50°	21.4	24.8	105.8	211.7	290.5
52.5°	18.0	20.3	75.4	177.9	244.3
55°	14.6	18.0	51.8	141.9	200.4
57.5°	12.4	15.8	40.5	110.3	156.5
60°	9.0	13.5	38.3	81.1	114.8
62.5°	6.8	14.6	33.8	56.3	75.4
65°	5.6	16.9	28.1	37.2	40.5
67.5°	4.5	18.0	24.8	23.6	23.6
70°	4.5	16.9	21.4	20.3	21.4
72.5°	4.5	18.0	19.1	18.0	19.1
75°	4.5	16.9	16.9	16.9	16.9
77.5°	4.5	15.8	15.8	14.6	14.6
80°	4.5	13.5	13.5	13.5	12.4
82.5°	4.5	12.4	12.4	12.4	10.1
85°	4.5	11.3	11.3	11.3	9.0
87.5°	3.4	10.1	11.3	10.1	6.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059411
 CATALOG NUMBER: S123RDR-H1000D830-X4F0-XX-UDD-BVL-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	0.39	1.65	0.76	1.96	2.27	14.62	15.88	14.99	16.19	16.51
	3H	2.72	3.83	3.10	4.16	4.52	14.70	15.81	15.08	16.15	16.51
	4H	3.82	4.85	4.22	5.20	5.59	14.78	15.82	15.19	16.17	16.55
	6H	4.81	5.76	5.22	6.13	6.52	14.89	15.83	15.30	16.21	16.60
	8H	5.29	6.19	5.72	6.58	6.98	14.94	15.84	15.37	16.23	16.64
	12H	5.85	6.70	6.28	7.09	7.52	15.02	15.88	15.46	16.27	16.70
4H	2H	3.63	4.66	4.03	5.01	5.40	14.48	15.51	14.88	15.86	16.25
	3H	5.94	6.79	6.36	7.19	7.60	14.65	15.50	15.07	15.90	16.31
	4H	7.32	8.07	7.75	8.49	8.94	14.81	15.56	15.24	15.98	16.43
	6H	8.40	9.06	8.87	9.50	9.97	15.03	15.68	15.49	16.13	16.60
	8H	8.86	9.47	9.33	9.92	10.39	15.15	15.76	15.62	16.21	16.68
	12H	9.36	9.89	9.84	10.38	10.85	15.33	15.87	15.82	16.35	16.83
8H	4H	8.29	8.90	8.76	9.35	9.82	14.80	15.41	15.27	15.86	16.33
	6H	9.81	10.31	10.32	10.81	11.29	15.14	15.64	15.64	16.14	16.62
	8H	10.59	11.04	11.11	11.55	12.05	15.37	15.82	15.90	16.34	16.83
	12H	11.39	11.79	11.91	12.29	12.86	15.71	16.11	16.22	16.60	17.17
12H	4H	8.47	9.01	8.96	9.49	9.96	14.79	15.33	15.27	15.81	16.28
	6H	10.13	10.58	10.65	11.09	11.59	15.16	15.61	15.68	16.12	16.62
	8H	11.09	11.48	11.60	11.98	12.55	15.47	15.87	15.99	16.36	16.94