

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: P1059578

Luminaire Tested: S123RDR-H340D830-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059578
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-H340D830-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, 80 CRI LEDS
Ballast/Driver: -

Summary

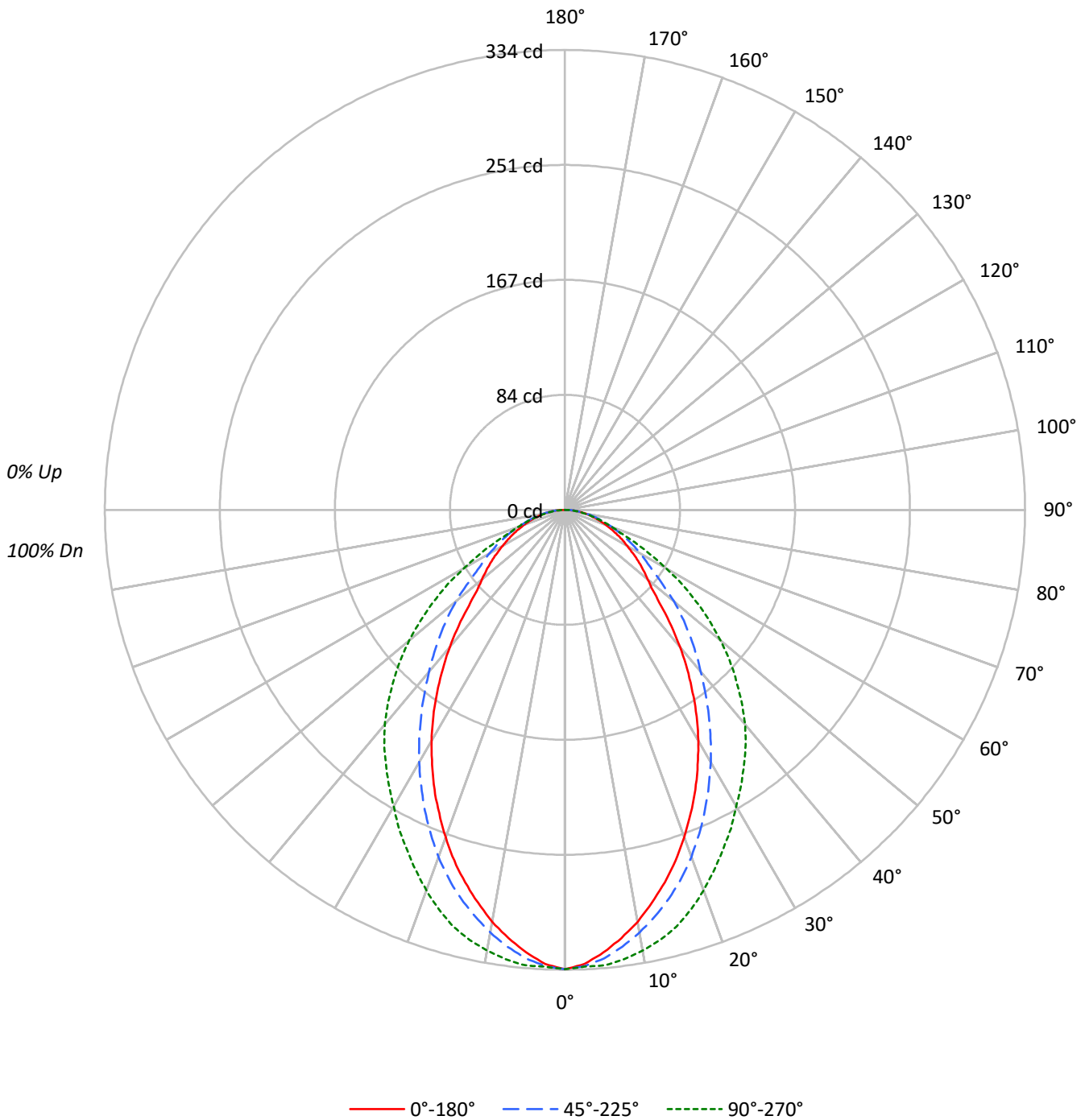
Lumens per Lamp: N/A
Luminaire Lumens: 602.6 lumens
Efficiency: N/A
Efficacy: 51.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P1059578

CATALOG NUMBER: S123RDR-H340D830-X4F0-XX-UDD-WVL-S

Luminous Intensity Polar Plot





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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	65	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°	3917	3917	3917
5°	3803	3854	3913
10°	3624	3717	3875
15°	3404	3551	3809
20°	3161	3353	3675
25°	2904	3116	3522
30°	2625	2869	3372
35°	2315	2608	3245
40°	1990	2350	3118
45°	1637	2117	2923
50°	1436	1885	2693
55°	1329	1609	2385
60°	1221	1480	1975
65°	1142	1359	1553
70°	1075	1236	1236
75°	1012	1134	1066
80°	953	1035	899
85°	889	997	687

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2923 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.9	5.1
10°-20°	82.7	13.7
20°-30°	112.1	18.6
30°-40°	117.2	19.5
40°-50°	101.7	16.9
50°-60°	75.6	12.6
60°-70°	48.5	8.1
70°-80°	26.0	4.3
80°-90°	7.9	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°	225.7	37.4
0°-40°	342.9	56.9
0°-60°	520.2	86.3
0°-90°	602.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	602.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	334	334	334	334	334	
5°	323	328	327	329	332	30
15°	280	287	292	304	313	78
25°	224	231	240	257	272	103
35°	162	169	182	205	226	101
45°	99	106	128	155	176	78
55°	65	66	79	101	116	58
65°	41	45	49	52	56	41
75°	22	26	25	24	24	24
85°	7	8	7	6	5	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	333.6	333.6	333.6	333.6	333.6
2.5°	330.1	334.8	331.6	331.6	332.0
5°	322.6	328.1	327.0	329.3	332.0
7.5°	313.7	319.5	319.9	325.4	329.3
10°	303.9	309.7	311.7	319.5	325.0
12.5°	292.1	298.8	302.3	312.1	319.9
15°	280.0	286.7	292.1	303.9	313.3
17.5°	267.1	273.8	280.8	294.1	304.3
20°	253.0	260.1	268.3	281.6	294.1
22.5°	238.6	246.0	254.6	269.1	283.1
25°	224.1	231.1	240.5	256.6	271.8
27.5°	208.8	216.3	226.1	243.6	260.9
30°	193.6	201.0	211.6	230.4	248.7
32.5°	177.9	185.4	196.7	217.8	237.8
35°	161.5	169.3	181.9	204.9	226.4
37.5°	145.9	153.3	167.4	192.8	215.5
40°	129.8	137.7	153.3	180.7	203.4
42.5°	114.2	122.0	140.4	167.8	190.1
45°	98.6	106.0	127.5	154.9	176.0
47.5°	86.4	91.9	115.4	141.2	162.3
50°	78.6	80.6	103.2	127.9	147.4
52.5°	71.6	73.1	90.0	114.6	132.2
55°	64.9	66.5	78.6	100.9	116.5
57.5°	58.3	60.2	70.0	86.8	100.9
60°	52.0	54.4	63.0	74.3	84.1
62.5°	46.5	49.3	55.9	63.0	69.6
65°	41.1	44.6	48.9	52.0	55.9
67.5°	36.0	39.9	42.2	43.0	43.4
70°	31.3	35.2	36.0	36.0	36.0
72.5°	26.6	30.9	30.1	29.7	29.3
75°	22.3	25.8	25.0	23.9	23.5
77.5°	18.0	21.1	19.9	19.2	18.0
80°	14.1	16.4	15.3	14.5	13.3
82.5°	10.6	12.1	11.0	10.2	9.0
85°	6.6	8.2	7.4	6.3	5.1
87.5°	3.5	4.7	3.9	3.5	2.0
90°	0.0	0.0	0.0	0.0	0.0



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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	11.53	13.01	11.89	13.32	13.64	14.28	15.77	14.65	16.08	16.40
	3H	13.24	14.57	13.62	14.90	15.26	15.31	16.63	15.68	16.96	17.32
	4H	13.90	15.15	14.30	15.49	15.87	15.67	16.92	16.07	17.27	17.65
	6H	14.40	15.55	14.81	15.92	16.31	15.93	17.08	16.34	17.44	17.84
	8H	14.58	15.67	15.01	16.06	16.47	16.00	17.09	16.42	17.48	17.88
	12H	14.71	15.75	15.14	16.14	16.57	16.03	17.08	16.46	17.46	17.89
4H	2H	12.30	13.55	12.70	13.90	14.28	14.56	15.80	14.96	16.15	16.53
	3H	14.23	15.26	14.64	15.66	16.07	15.81	16.84	16.22	17.24	17.65
	4H	15.04	15.97	15.47	16.39	16.83	16.30	17.23	16.73	17.64	18.08
	6H	15.68	16.49	16.14	16.93	17.39	16.68	17.49	17.14	17.93	18.39
	8H	15.91	16.67	16.37	17.11	17.58	16.79	17.55	17.26	17.99	18.46
	12H	16.08	16.76	16.57	17.24	17.71	16.86	17.54	17.35	18.02	18.49
8H	4H	15.36	16.11	15.82	16.56	17.03	16.49	17.24	16.95	17.69	18.16
	6H	16.15	16.78	16.65	17.27	17.75	16.98	17.60	17.48	18.10	18.57
	8H	16.48	17.04	17.00	17.55	18.04	17.16	17.72	17.67	18.23	18.72
	12H	16.76	17.25	17.27	17.75	18.31	17.29	17.79	17.80	18.28	18.84
12H	4H	15.38	16.06	15.87	16.54	17.01	16.50	17.18	16.99	17.66	18.13
	6H	16.21	16.77	16.72	17.28	17.77	17.02	17.58	17.53	18.09	18.58
	8H	16.60	17.10	17.11	17.59	18.16	17.25	17.74	17.76	18.24	18.80