

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: P1059660

Luminaire Tested: S123RDR-H560D830-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059660
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D830-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE 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

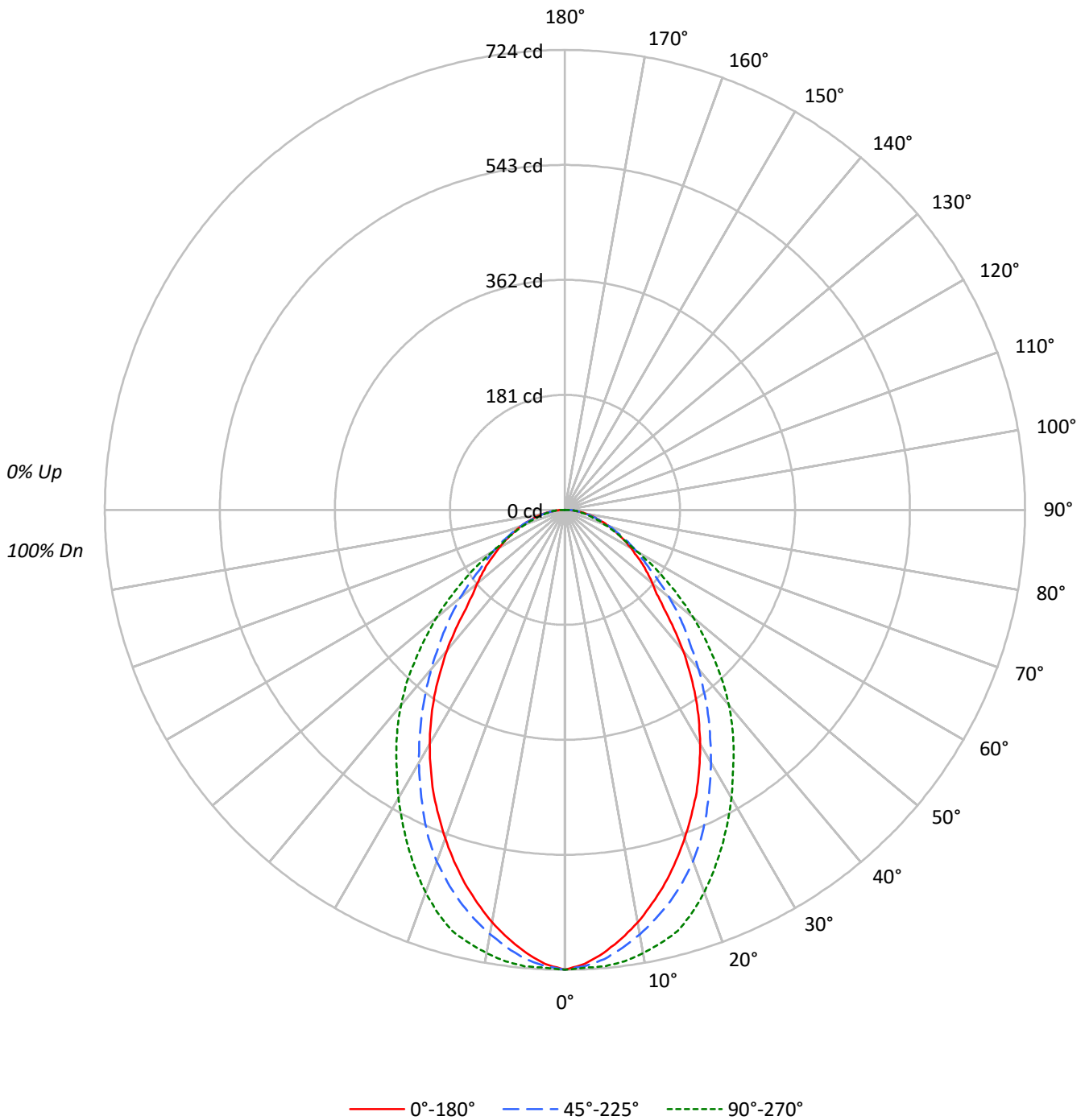
Lumens per Lamp: N/A
Luminaire Lumens: 1271.8 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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: P1059660

CATALOG NUMBER: S123RDR-H560D830-X4F0-XX-UDD-WVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1059660

CATALOG NUMBER: S123RDR-H560D830-X4F0-XX-UDD-WVL-W

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	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	101	97	100	97	94	96	94	92	92	91	89	87																				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75																				
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66																				
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58																				
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51																				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41																				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																				
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8499	8499	8499
5°	8252	8370	8502
10°	7865	8088	8451
15°	7397	7761	8344
20°	6880	7363	8009
25°	6351	6827	7569
30°	5768	6233	7102
35°	5133	5625	6634
40°	4430	5012	6148
45°	3662	4437	5513
50°	3288	3915	4814
55°	3048	3341	3992
60°	2809	3044	3058
65°	2615	2751	2562
70°	2458	2503	2245
75°	2318	2232	1978
80°	2191	2022	1853
85°	2102	2263	2102

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5513 cd/sqm



TEST NUMBER: P1059660

CATALOG NUMBER: S123RDR-H560D830-X4F0-XX-UDD-WVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	5.3
10°-20°	180.6	14.2
20°-30°	244.3	19.2
30°-40°	251.1	19.7
40°-50°	210.9	16.6
50°-60°	151.2	11.9
60°-70°	96.2	7.6
70°-80°	52.9	4.2
80°-90°	17.6	1.4
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°	491.9	38.7
0°-40°	743.0	58.4
0°-60°	1105.0	86.9
0°-90°	1271.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	724	724	724	724	724	
5°	700	713	710	715	721	66
15°	608	625	638	666	686	171
25°	490	509	527	556	584	225
35°	358	378	392	427	463	223
45°	220	240	267	306	332	174
55°	149	152	163	185	195	133
65°	94	100	99	93	92	94
75°	51	56	49	46	44	54
85°	16	16	17	17	16	17
90°	0	0	0	0	0	



TEST NUMBER: P1059660

CATALOG NUMBER: S123RDR-H560D830-X4F0-XX-UDD-WVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	723.8	723.8	723.8	723.8	723.8
2.5°	715.7	725.6	718.8	719.4	721.3
5°	700.1	712.6	710.1	715.0	721.3
7.5°	680.8	694.5	695.1	706.9	716.9
10°	659.6	673.9	678.3	696.4	708.8
12.5°	634.7	650.3	659.6	682.0	698.2
15°	608.5	625.4	638.4	665.8	686.4
17.5°	579.9	597.9	614.8	644.0	665.2
20°	550.6	569.9	589.2	616.6	640.9
22.5°	520.1	540.0	560.0	586.7	613.5
25°	490.2	508.9	526.9	555.6	584.2
27.5°	457.8	477.1	492.7	524.4	554.3
30°	425.4	444.7	459.7	492.7	523.8
32.5°	391.8	411.7	425.4	459.7	492.1
35°	358.1	377.5	392.4	427.3	462.8
37.5°	322.6	343.8	358.8	398.0	432.9
40°	289.0	308.9	327.0	368.1	401.1
42.5°	254.1	274.7	295.2	337.6	368.1
45°	220.5	239.8	267.2	305.8	332.0
47.5°	196.2	208.7	240.4	272.8	297.7
50°	180.0	185.0	214.3	242.9	263.5
52.5°	163.8	167.5	187.5	213.6	229.2
55°	148.9	152.0	163.2	185.0	195.0
57.5°	132.7	135.8	145.1	157.6	163.2
60°	119.6	122.1	129.6	131.4	130.2
62.5°	106.5	110.2	114.0	109.6	107.8
65°	94.1	99.7	99.0	93.4	92.2
67.5°	82.8	88.4	85.3	79.7	77.9
70°	71.6	77.2	72.9	67.3	65.4
72.5°	61.0	67.3	60.4	55.4	54.2
75°	51.1	56.1	49.2	45.5	43.6
77.5°	41.7	45.5	39.2	36.1	34.9
80°	32.4	34.9	29.9	28.0	27.4
82.5°	23.7	24.9	21.8	23.0	22.4
85°	15.6	16.2	16.8	17.4	15.6
87.5°	7.5	10.6	10.6	10.0	8.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059660
 CATALOG NUMBER: S123RDR-H560D830-X4F0-XX-UDD-WVL-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	14.62	16.08	14.99	16.40	16.71	15.69	17.15	16.05	17.47	17.78
	3H	16.32	17.63	16.69	17.96	18.32	16.77	18.09	17.15	18.41	18.78
	4H	16.97	18.20	17.37	18.55	18.93	17.18	18.40	17.58	18.75	19.13
	6H	17.47	18.61	17.89	18.97	19.37	17.49	18.62	17.90	18.99	19.38
	8H	17.65	18.72	18.07	19.11	19.52	17.62	18.70	18.05	19.09	19.49
	12H	17.77	18.80	18.20	19.19	19.62	17.74	18.77	18.17	19.15	19.58
4H	2H	15.22	16.45	15.62	16.80	17.18	16.09	17.32	16.49	17.67	18.05
	3H	17.15	18.17	17.56	18.57	18.97	17.41	18.43	17.82	18.83	19.23
	4H	17.96	18.88	18.39	19.29	19.73	17.93	18.85	18.36	19.26	19.70
	6H	18.61	19.40	19.07	19.85	20.31	18.36	19.16	18.82	19.60	20.06
	8H	18.83	19.58	19.30	20.02	20.49	18.55	19.30	19.02	19.74	20.21
	12H	19.00	19.67	19.49	20.15	20.62	18.73	19.40	19.22	19.88	20.35
8H	4H	18.20	18.94	18.66	19.39	19.86	18.18	18.92	18.64	19.37	19.83
	6H	18.99	19.60	19.48	20.09	20.57	18.72	19.34	19.22	19.83	20.31
	8H	19.30	19.85	19.81	20.36	20.85	19.00	19.55	19.51	20.06	20.55
	12H	19.57	20.06	20.08	20.55	21.12	19.29	19.78	19.80	20.27	20.84
12H	4H	18.21	18.87	18.69	19.35	19.82	18.20	18.87	18.69	19.35	19.82
	6H	19.02	19.57	19.54	20.08	20.57	18.78	19.33	19.29	19.84	20.33
	8H	19.40	19.88	19.91	20.38	20.94	19.12	19.60	19.63	20.10	20.66