

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: P1059658

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059658
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
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-B
Description: DEFINE 3 BLACK 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

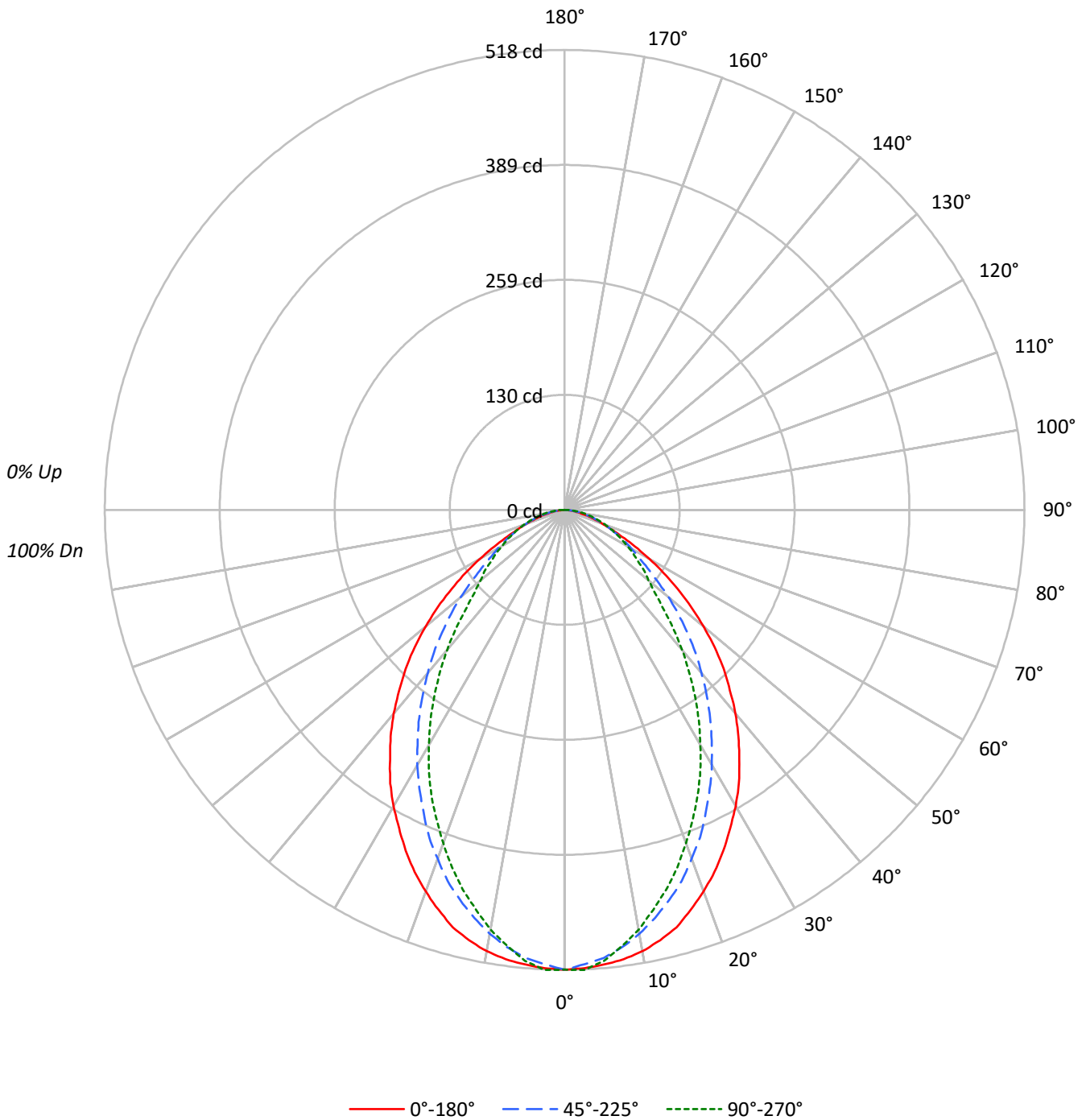
Lumens per Lamp: N/A
Luminaire Lumens: 905.7 lumens
Efficiency: N/A
Efficacy: 52.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6081	6081	6081
5°	6060	5973	6009
10°	6019	5782	5722
15°	5917	5531	5381
20°	5717	5227	4993
25°	5484	4872	4597
30°	5224	4499	4144
35°	4917	4095	3667
40°	4589	3673	3158
45°	4206	3245	2594
50°	3730	2786	2251
55°	3173	2332	2064
60°	2588	2031	1914
65°	1973	1798	1781
70°	1538	1603	1665
75°	1243	1438	1552
80°	926	1177	1434
85°	498	754	1253

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	5.3
10°-20°	129.3	14.3
20°-30°	175.8	19.4
30°-40°	182.3	20.1
40°-50°	153.7	17.0
50°-60°	109.1	12.0
60°-70°	66.7	7.4
70°-80°	33.2	3.7
80°-90°	7.5	0.8
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°	353.2	39.0
0°-40°	535.5	59.1
0°-60°	798.3	88.1
0°-90°	905.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	905.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	518	518	518	518	518	
5°	514	514	507	510	510	49
15°	487	477	455	447	443	137
25°	423	405	376	362	355	195
35°	343	317	286	266	256	215
45°	253	227	195	169	156	195
55°	155	139	114	104	101	139
65°	71	68	65	65	64	72
75°	27	29	32	33	34	30
85°	4	4	6	8	9	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	517.9	517.9	517.9	517.9	517.9
2.5°	516.6	517.2	512.3	517.9	518.5
5°	514.1	514.1	506.7	509.8	509.8
7.5°	510.4	509.2	496.7	496.7	495.5
10°	504.8	501.1	484.9	481.8	479.9
12.5°	496.7	490.5	470.6	465.0	461.2
15°	486.7	477.4	455.0	446.9	442.6
17.5°	472.4	463.1	438.2	427.0	422.0
20°	457.5	443.8	418.3	407.1	399.6
22.5°	441.3	423.9	399.0	385.3	377.2
25°	423.3	404.6	376.0	362.3	354.8
27.5°	404.0	383.4	354.2	338.6	331.1
30°	385.3	361.6	331.8	314.3	305.6
32.5°	365.4	338.6	308.1	290.1	281.3
35°	343.0	316.8	285.7	265.8	255.8
37.5°	321.8	295.0	262.7	241.5	230.3
40°	299.4	272.6	239.6	217.9	206.0
42.5°	275.7	250.2	217.9	192.3	181.1
45°	253.3	226.6	195.4	168.7	156.2
47.5°	229.1	204.2	173.7	146.3	137.6
50°	204.2	181.1	152.5	127.6	123.2
52.5°	179.9	160.6	131.3	115.2	113.3
55°	155.0	138.8	113.9	103.9	100.8
57.5°	132.0	120.1	97.7	92.7	91.5
60°	110.2	100.2	86.5	83.4	81.5
62.5°	89.0	83.4	75.3	74.1	72.8
65°	71.0	68.5	64.7	64.7	64.1
67.5°	56.0	56.0	55.4	56.6	56.0
70°	44.8	45.4	46.7	47.9	48.5
72.5°	35.5	37.3	38.6	40.5	41.1
75°	27.4	29.3	31.7	33.0	34.2
77.5°	19.9	21.8	24.3	26.1	27.4
80°	13.7	14.9	17.4	19.9	21.2
82.5°	8.7	9.3	11.2	13.7	14.9
85°	3.7	4.4	5.6	8.1	9.3
87.5°	0.0	0.0	0.6	2.5	4.4
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	15.08	16.53	15.45	16.84	17.16	13.18	14.63	13.54	14.94	15.25
	3H	15.98	17.27	16.36	17.60	17.96	14.75	16.04	15.13	16.37	16.73
	4H	16.26	17.47	16.66	17.82	18.20	15.34	16.56	15.74	16.91	17.29
	6H	16.41	17.53	16.82	17.89	18.29	15.79	16.91	16.21	17.28	17.67
	8H	16.43	17.49	16.86	17.88	18.29	15.94	17.01	16.37	17.40	17.80
	12H	16.43	17.44	16.86	17.82	18.25	16.04	17.06	16.47	17.44	17.87
4H	2H	15.32	16.54	15.72	16.89	17.27	13.72	14.93	14.12	15.28	15.66
	3H	16.44	17.44	16.85	17.84	18.24	15.49	16.49	15.90	16.89	17.29
	4H	16.83	17.73	17.26	18.14	18.58	16.20	17.10	16.64	17.52	17.96
	6H	17.07	17.85	17.53	18.29	18.75	16.77	17.55	17.23	18.00	18.46
	8H	17.11	17.84	17.58	18.28	18.75	16.97	17.69	17.43	18.14	18.61
	12H	17.12	17.77	17.60	18.25	18.72	17.10	17.75	17.59	18.23	18.70
8H	4H	16.99	17.71	17.45	18.16	18.63	16.41	17.14	16.88	17.58	18.05
	6H	17.30	17.90	17.80	18.39	18.87	17.09	17.69	17.59	18.18	18.66
	8H	17.37	17.91	17.89	18.42	18.91	17.34	17.88	17.86	18.39	18.88
	12H	17.41	17.88	17.92	18.38	18.94	17.55	18.03	18.06	18.52	19.09
12H	4H	16.99	17.64	17.47	18.12	18.59	16.41	17.06	16.89	17.54	18.01
	6H	17.31	17.85	17.83	18.36	18.85	17.10	17.63	17.61	18.15	18.64
	8H	17.43	17.90	17.94	18.39	18.96	17.40	17.87	17.91	18.37	18.93