

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: P1058384

Luminaire Tested: S122RDR-H485D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058384
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-60)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H485D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

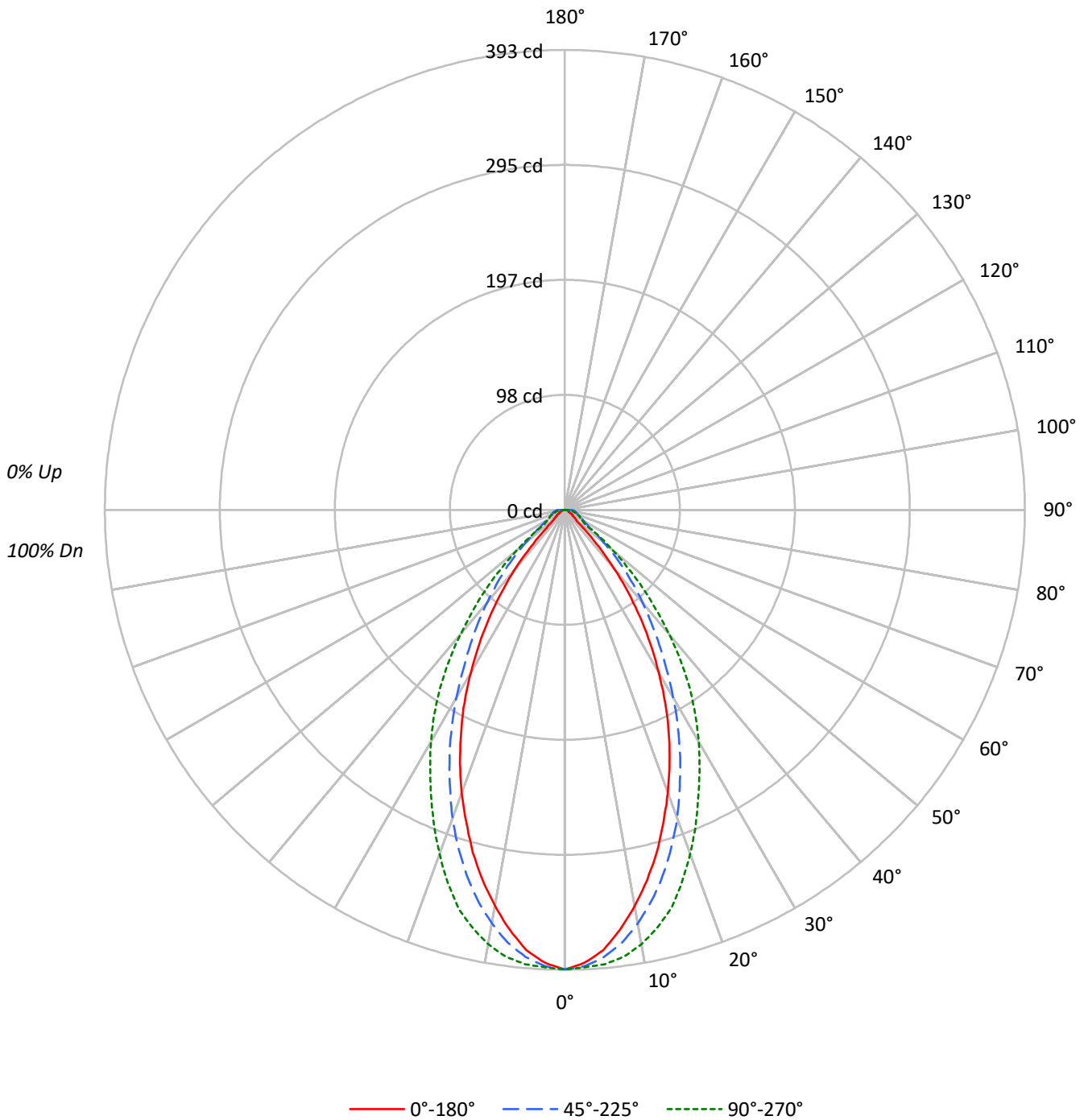
Lumens per Lamp: N/A
Luminaire Lumens: 423.3 lumens
Efficiency: N/A
Efficacy: 24.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7246	7246	7246
5°	6994	7105	7218
10°	6442	6723	7062
15°	5792	6180	6726
20°	5053	5510	6144
25°	4274	4748	5499
30°	3413	3944	4873
35°	2525	3169	4185
40°	1595	2483	3334
45°	629	1866	2453
50°	324	1252	1513
55°	267	824	679
60°	196	668	609
65°	166	624	624
70°	162	647	610
75°	214	749	642
80°	319	956	723
85°	487	1588	953

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 3173 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.9	8.5
10°-20°	90.7	21.4
20°-30°	107.8	25.5
30°-40°	89.7	21.2
40°-50°	50.1	11.8
50°-60°	20.2	4.8
60°-70°	12.9	3.1
70°-80°	9.7	2.3
80°-90°	6.2	1.5
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°	234.4	55.4
0°-40°	324.1	76.6
0°-60°	394.5	93.2
0°-90°	423.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	423.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	393	393	393	393	393	
5°	378	384	384	387	390	35
15°	303	312	324	340	352	84
25°	210	218	233	251	270	96
35°	112	123	141	164	186	70
45°	24	41	72	84	94	23
55°	8	17	26	25	21	7
65°	4	15	14	14	14	4
75°	3	10	10	10	9	3
85°	2	7	8	7	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	392.7	392.7	392.7	392.7	392.7
2.5°	387.4	393.4	390.4	390.4	391.2
5°	377.6	384.4	383.6	386.7	389.7
7.5°	361.8	369.4	373.1	379.9	385.2
10°	343.8	352.1	358.8	369.4	376.9
12.5°	324.2	332.5	342.3	355.8	365.6
15°	303.2	312.2	323.5	340.0	352.1
17.5°	279.8	289.6	302.4	320.5	333.2
20°	257.3	267.0	280.6	298.6	312.9
22.5°	233.9	242.2	256.5	274.6	291.9
25°	209.9	218.2	233.2	251.3	270.1
27.5°	185.8	194.1	209.1	227.9	249.0
30°	160.2	169.3	185.1	206.1	228.7
32.5°	136.2	145.2	161.7	185.1	207.6
35°	112.1	122.6	140.7	164.0	185.8
37.5°	88.8	100.8	121.1	142.9	162.5
40°	66.2	79.0	103.1	121.9	138.4
42.5°	43.6	58.7	86.5	102.3	115.1
45°	24.1	40.6	71.5	83.5	94.0
47.5°	13.5	26.3	56.4	66.2	72.2
50°	11.3	19.6	43.6	50.4	52.7
52.5°	9.0	18.1	33.1	36.9	35.4
55°	8.3	17.3	25.6	24.8	21.1
57.5°	6.8	17.3	20.3	18.1	18.1
60°	5.3	16.5	18.1	15.8	16.5
62.5°	4.5	15.8	16.5	15.0	15.0
65°	3.8	15.0	14.3	13.5	14.3
67.5°	3.0	13.5	13.5	12.8	12.8
70°	3.0	12.8	12.0	11.3	11.3
72.5°	3.0	11.3	11.3	10.5	10.5
75°	3.0	10.5	10.5	9.8	9.0
77.5°	3.0	9.0	9.8	9.0	8.3
80°	3.0	8.3	9.0	8.3	6.8
82.5°	3.0	7.5	8.3	7.5	6.0
85°	2.3	6.8	7.5	6.8	4.5
87.5°	2.3	6.8	7.5	6.0	3.8
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	5.25	6.47	5.61	6.78	7.09	6.34	7.56	6.70	7.87	8.18
	3H	6.58	7.66	6.96	7.99	8.36	8.36	9.45	8.74	9.78	10.14
	4H	7.15	8.16	7.55	8.51	8.89	9.31	10.32	9.72	10.67	11.06
	6H	7.71	8.64	8.13	9.01	9.41	10.26	11.19	10.68	11.56	11.96
	8H	8.04	8.92	8.47	9.31	9.71	10.71	11.59	11.14	11.98	12.39
	12H	8.35	9.19	8.78	9.57	10.00	11.13	11.97	11.56	12.35	12.78
4H	2H	6.21	7.22	6.61	7.57	7.96	7.01	8.02	7.41	8.37	8.76
	3H	8.24	9.07	8.65	9.47	9.88	9.29	10.12	9.70	10.53	10.93
	4H	9.31	10.06	9.75	10.48	10.92	10.43	11.18	10.87	11.60	12.05
	6H	10.18	10.83	10.65	11.28	11.75	11.61	12.25	12.07	12.70	13.17
	8H	10.59	11.20	11.06	11.65	12.12	12.17	12.77	12.64	13.22	13.69
	12H	10.98	11.51	11.47	12.00	12.47	12.71	13.24	13.19	13.73	14.20
8H	4H	10.08	10.69	10.55	11.14	11.61	10.98	11.59	11.45	12.04	12.51
	6H	11.42	11.92	11.93	12.42	12.90	12.44	12.94	12.94	13.43	13.92
	8H	12.14	12.58	12.66	13.10	13.59	13.20	13.65	13.72	14.16	14.66
	12H	12.84	13.23	13.35	13.73	14.30	13.99	14.38	14.50	14.88	15.45
12H	4H	10.24	10.77	10.73	11.26	11.73	11.09	11.62	11.58	12.11	12.58
	6H	11.75	12.19	12.27	12.71	13.20	12.67	13.11	13.19	13.63	14.12
	8H	12.65	13.04	13.16	13.54	14.11	13.57	13.96	14.09	14.46	15.03