

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: P1058411

Luminaire Tested: S122RDR-H485D935-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058411  
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-H485D935-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: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

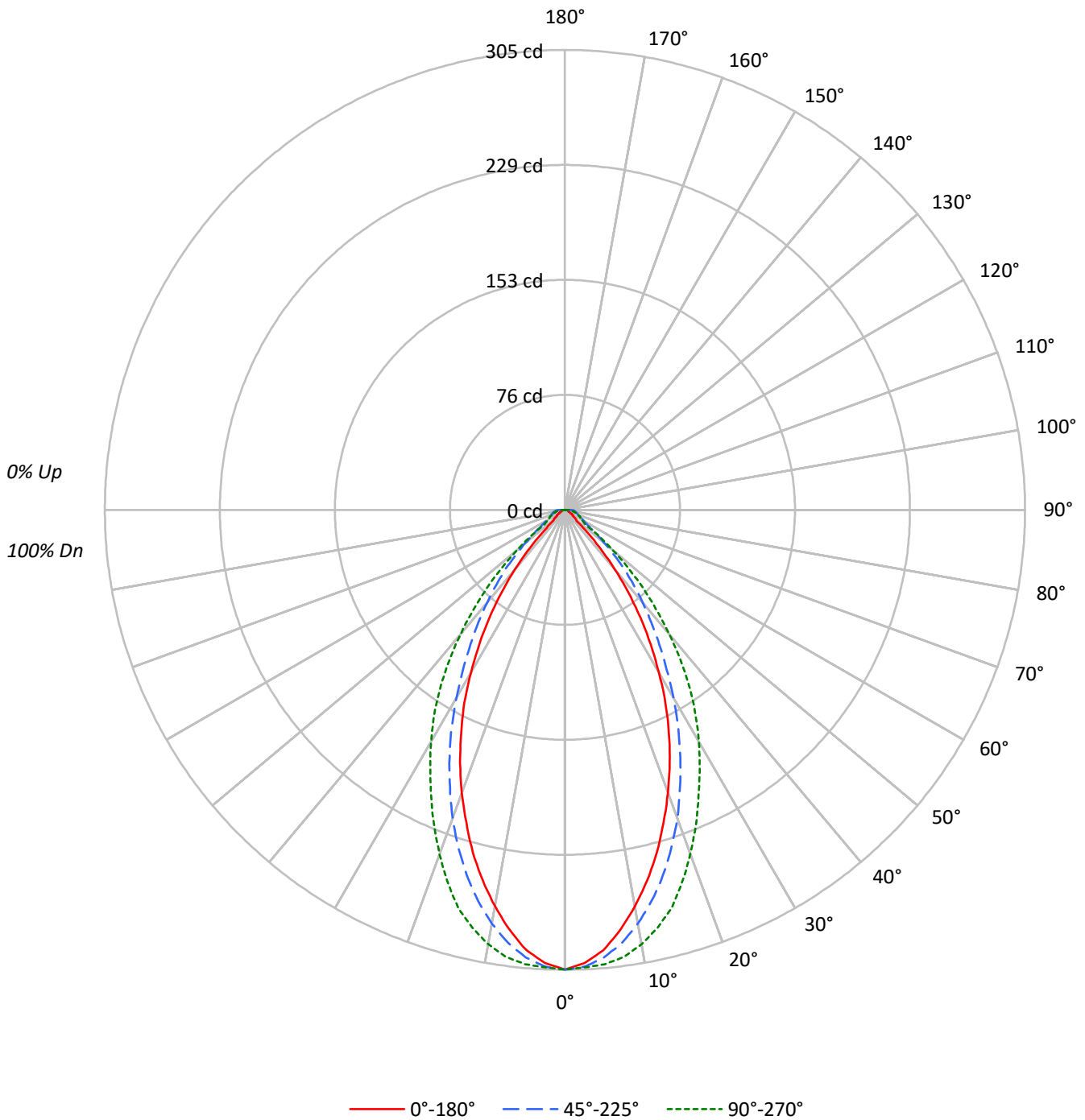
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 328.6 lumens  
Efficiency: N/A  
Efficacy: 18.9 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	
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			100	
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90			90	
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81			81	
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74			74	
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67			67	
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	67	63	61			61	
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57			57	
7	77	67	60	55	76	66	59	55	65	59	54	63	58	54	62	57	54	52			52	
8	73	62	55	51	72	62	55	51	61	55	50	59	54	50	58	54	50	48			48	
9	69	58	52	47	68	58	51	47	57	51	47	56	51	47	55	50	47	45			45	
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44	42			42	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5626	5626	5626
5°	5431	5518	5603
10°	5001	5220	5482
15°	4497	4797	5221
20°	3921	4277	4772
25°	3317	3685	4270
30°	2651	3062	3782
35°	1960	2460	3251
40°	1238	1927	2589
45°	488	1448	1905
50°	253	973	1174
55°	206	640	528
60°	151	517	472
65°	127	485	485
70°	124	502	475
75°	164	585	499
80°	244	744	563
85°	381	1228	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 87.5°  
 Luminance: 2454 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.9	8.5
10°-20°	70.4	21.4
20°-30°	83.7	25.5
30°-40°	69.6	21.2
40°-50°	38.9	11.8
50°-60°	15.7	4.8
60°-70°	10.0	3.1
70°-80°	7.5	2.3
80°-90°	4.8	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°	182.0	55.4
0°-40°	251.6	76.6
0°-60°	306.2	93.2
0°-90°	328.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	328.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	305	305	305	305	305	
5°	293	298	298	300	302	27
15°	235	242	251	264	273	65
25°	163	169	181	195	210	74
35°	87	95	109	127	144	54
45°	19	32	56	65	73	18
55°	6	13	20	19	16	6
65°	3	12	11	10	11	3
75°	2	8	8	8	7	2
85°	2	5	6	5	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	304.9	304.9	304.9	304.9	304.9
2.5°	300.8	305.4	303.1	303.1	303.7
5°	293.2	298.4	297.9	300.2	302.5
7.5°	280.9	286.8	289.7	294.9	299.0
10°	266.9	273.3	278.6	286.8	292.6
12.5°	251.7	258.1	265.7	276.2	283.8
15°	235.4	242.4	251.1	264.0	273.3
17.5°	217.3	224.8	234.8	248.8	258.7
20°	199.7	207.3	217.8	231.9	243.0
22.5°	181.6	188.1	199.2	213.2	226.6
25°	162.9	169.4	181.0	195.1	209.7
27.5°	144.3	150.7	162.4	177.0	193.3
30°	124.4	131.4	143.7	160.0	177.5
32.5°	105.7	112.7	125.6	143.7	161.2
35°	87.0	95.2	109.2	127.3	144.3
37.5°	68.9	78.3	94.0	111.0	126.1
40°	51.4	61.3	80.0	94.6	107.5
42.5°	33.9	45.6	67.2	79.4	89.4
45°	18.7	31.5	55.5	64.8	73.0
47.5°	10.5	20.4	43.8	51.4	56.1
50°	8.8	15.2	33.9	39.1	40.9
52.5°	7.0	14.0	25.7	28.6	27.4
55°	6.4	13.4	19.9	19.3	16.4
57.5°	5.3	13.4	15.8	14.0	14.0
60°	4.1	12.8	14.0	12.3	12.8
62.5°	3.5	12.3	12.8	11.7	11.7
65°	2.9	11.7	11.1	10.5	11.1
67.5°	2.3	10.5	10.5	9.9	9.9
70°	2.3	9.9	9.3	8.8	8.8
72.5°	2.3	8.8	8.8	8.2	8.2
75°	2.3	8.2	8.2	7.6	7.0
77.5°	2.3	7.0	7.6	7.0	6.4
80°	2.3	6.4	7.0	6.4	5.3
82.5°	2.3	5.8	6.4	5.8	4.7
85°	1.8	5.3	5.8	5.3	3.5
87.5°	1.8	5.3	5.8	4.7	2.9
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	4.35	5.57	4.72	5.89	6.20	5.43	6.65	5.80	6.97	7.28
	3H	5.68	6.76	6.06	7.10	7.46	7.47	8.55	7.85	8.88	9.25
	4H	6.25	7.27	6.66	7.62	8.00	8.43	9.44	8.83	9.79	10.17
	6H	6.81	7.74	7.23	8.11	8.51	9.37	10.30	9.79	10.67	11.07
	8H	7.13	8.01	7.57	8.40	8.81	9.83	10.70	10.26	11.10	11.50
	12H	7.45	8.29	7.88	8.67	9.10	10.25	11.09	10.68	11.47	11.90
4H	2H	5.32	6.33	5.73	6.68	7.07	6.11	7.12	6.52	7.48	7.86
	3H	7.35	8.18	7.76	8.58	8.99	8.40	9.23	8.81	9.64	10.04
	4H	8.43	9.18	8.87	9.60	10.04	9.55	10.30	9.99	10.72	11.16
	6H	9.30	9.94	9.76	10.39	10.86	10.72	11.37	11.18	11.82	12.28
	8H	9.70	10.31	10.17	10.75	11.23	11.28	11.89	11.75	12.34	12.81
	12H	10.09	10.62	10.58	11.11	11.58	11.83	12.36	12.32	12.85	13.32
8H	4H	9.21	9.81	9.68	10.26	10.73	10.10	10.71	10.57	11.16	11.63
	6H	10.54	11.03	11.04	11.53	12.01	11.55	12.05	12.06	12.55	13.03
	8H	11.25	11.69	11.77	12.21	12.70	12.32	12.76	12.84	13.28	13.77
	12H	11.95	12.34	12.47	12.84	13.41	13.11	13.50	13.62	14.00	14.57
12H	4H	9.36	9.90	9.85	10.38	10.86	10.21	10.74	10.70	11.23	11.70
	6H	10.86	11.30	11.38	11.82	12.31	11.78	12.22	12.30	12.74	13.23
	8H	11.75	12.15	12.27	12.64	13.22	12.68	13.08	13.20	13.57	14.14