

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: P1060854

Luminaire Tested: S124RDR-H350D940-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060854  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H350D940-X4F0-XX-UDD-SVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

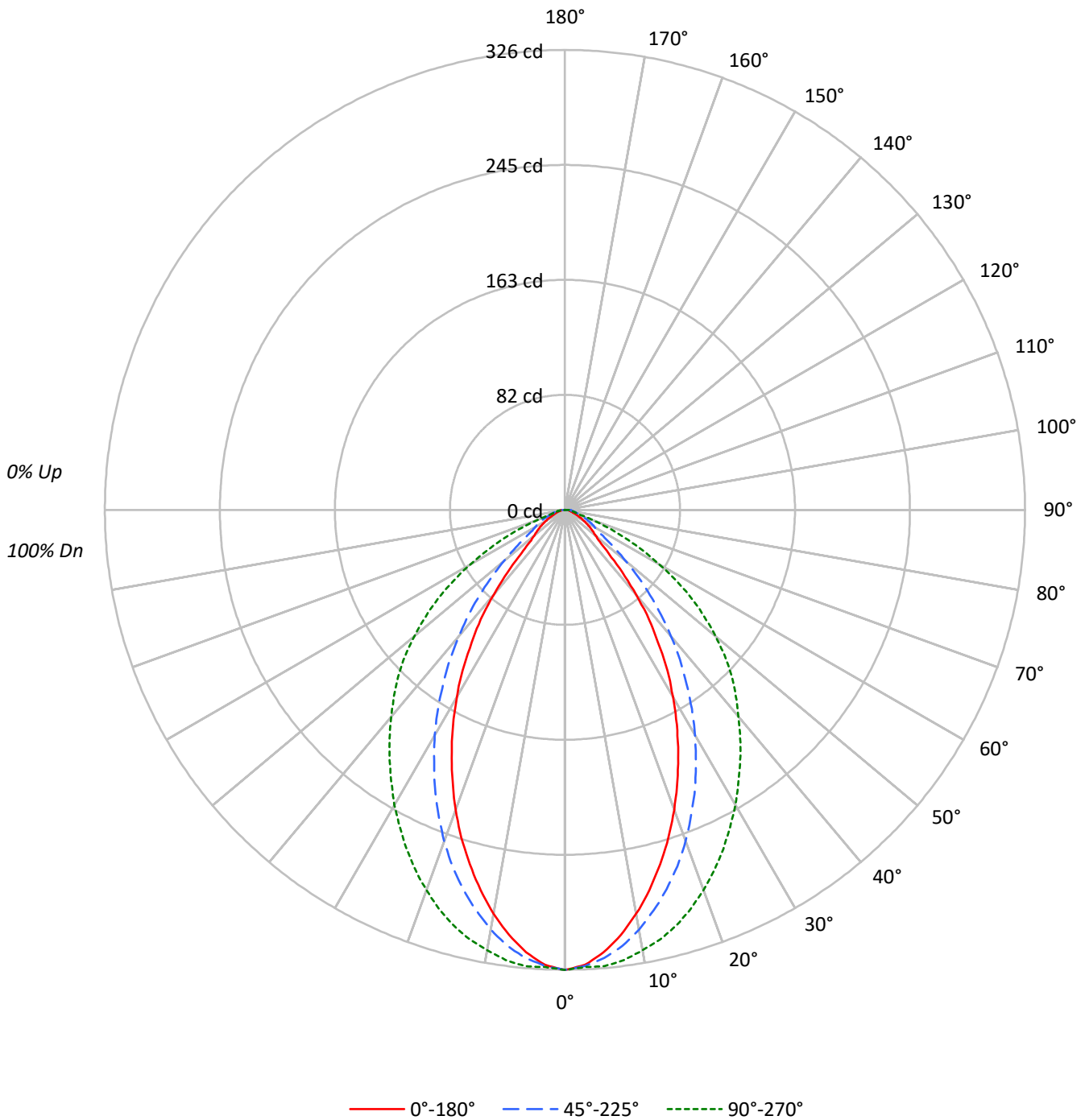
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 461.6 lumens  
Efficiency: N/A  
Efficacy: 39.5 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
Luminous Opening: Rectangular (W 0.31' 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

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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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79				79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63				63
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57				57
6	79	67	60	54	77	67	59	54	65	59	54	63	58	53	62	57	53	51				51
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47				47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43				43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39				39
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36				36

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

	0°	45°	90°
0°	2808	2808	2808
5°	2721	2756	2807
10°	2543	2642	2772
15°	2320	2482	2719
20°	2074	2291	2628
25°	1803	2070	2521
30°	1521	1834	2402
35°	1210	1578	2276
40°	880	1315	2150
45°	532	1039	2037
50°	380	752	1865
55°	323	509	1647
60°	264	415	1331
65°	208	371	958
70°	174	312	504
75°	156	289	256
80°	164	288	253
85°	217	435	287

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2037 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.0	6.5
10°-20°	78.7	17.0
20°-30°	102.0	22.1
30°-40°	98.2	21.3
40°-50°	73.1	15.8
50°-60°	44.9	9.7
60°-70°	22.1	4.8
70°-80°	8.6	1.9
80°-90°	3.9	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°	210.8	45.7
0°-40°	309.0	66.9
0°-60°	427.0	92.5
0°-90°	461.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	461.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	326	326	326	326	326	
5°	315	320	319	322	325	29
15°	260	269	278	295	305	73
25°	190	200	218	245	265	87
35°	115	126	150	188	216	72
45°	44	54	85	132	167	36
55°	22	22	34	77	110	19
65°	10	11	18	29	47	10
75°	5	8	9	8	8	5
85°	2	4	4	4	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	326.1	326.1	326.1	326.1	326.1
2.5°	322.9	326.5	323.6	323.9	324.3
5°	314.8	319.6	318.8	321.8	324.7
7.5°	303.9	309.4	311.9	317.8	321.8
10°	290.8	297.0	302.1	311.6	317.0
12.5°	276.2	283.5	290.8	303.5	311.9
15°	260.2	268.6	278.4	295.2	305.0
17.5°	243.8	252.2	264.9	284.2	296.6
20°	226.3	235.4	250.0	271.5	286.8
22.5°	208.1	217.9	233.9	258.4	276.6
25°	189.8	200.1	217.9	245.2	265.3
27.5°	171.6	181.5	200.8	231.4	253.3
30°	153.0	163.2	184.4	216.5	241.6
32.5°	135.2	144.7	167.3	202.2	228.8
35°	115.1	126.1	150.1	187.7	216.5
37.5°	98.0	107.9	133.7	173.1	204.1
40°	78.3	89.3	117.0	158.9	191.3
42.5°	60.1	71.1	100.9	144.7	179.3
45°	43.7	54.3	85.3	131.5	167.3
47.5°	33.2	39.4	70.0	118.8	153.8
50°	28.4	30.2	56.1	104.9	139.2
52.5°	25.1	25.9	43.7	91.1	124.6
55°	21.5	22.2	33.9	77.3	109.7
57.5°	18.2	18.6	27.3	64.1	93.6
60°	15.3	15.7	24.1	51.4	77.3
62.5°	12.8	13.1	21.5	39.7	61.6
65°	10.2	10.9	18.2	29.2	47.0
67.5°	8.4	9.8	15.3	20.4	32.8
70°	6.9	9.5	12.4	14.2	20.0
72.5°	5.8	8.7	10.6	10.2	9.8
75°	4.7	8.4	8.7	8.0	7.7
77.5°	4.0	7.3	7.3	6.6	6.2
80°	3.3	5.8	5.8	5.8	5.1
82.5°	2.9	4.7	5.1	5.1	4.0
85°	2.2	4.0	4.4	4.4	2.9
87.5°	1.5	3.6	4.0	3.6	2.2
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	3.38	4.72	3.74	5.03	5.35	12.54	13.88	12.90	14.19	14.51
	3H	4.48	5.68	4.86	6.01	6.37	13.04	14.23	13.42	14.56	14.93
	4H	5.00	6.11	5.40	6.46	6.84	13.06	14.17	13.47	14.52	14.91
	6H	5.43	6.45	5.85	6.82	7.22	13.08	14.10	13.49	14.47	14.86
	8H	5.62	6.59	6.05	6.98	7.38	13.08	14.05	13.51	14.44	14.84
	12H	5.80	6.73	6.24	7.11	7.54	13.08	14.01	13.51	14.39	14.82
4H	2H	4.52	5.63	4.92	5.98	6.36	12.43	13.54	12.83	13.89	14.27
	3H	5.86	6.77	6.27	7.17	7.57	13.02	13.93	13.43	14.33	14.73
	4H	6.59	7.40	7.03	7.82	8.27	13.08	13.89	13.51	14.31	14.75
	6H	7.20	7.90	7.66	8.35	8.82	13.15	13.86	13.62	14.30	14.77
	8H	7.44	8.10	7.91	8.54	9.01	13.18	13.84	13.65	14.29	14.76
	12H	7.68	8.26	8.16	8.74	9.21	13.22	13.80	13.71	14.29	14.76
8H	4H	7.06	7.72	7.53	8.16	8.63	13.04	13.69	13.50	14.14	14.61
	6H	7.91	8.44	8.41	8.94	9.42	13.16	13.70	13.66	14.20	14.68
	8H	8.31	8.79	8.83	9.31	9.80	13.25	13.73	13.77	14.24	14.74
	12H	8.73	9.16	9.24	9.65	10.22	13.37	13.79	13.88	14.29	14.86
12H	4H	7.11	7.69	7.60	8.18	8.65	13.01	13.59	13.49	14.07	14.55
	6H	8.04	8.52	8.56	9.03	9.53	13.14	13.63	13.66	14.14	14.63
	8H	8.56	8.98	9.07	9.48	10.05	13.28	13.71	13.79	14.20	14.77