

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: P1060770

Luminaire Tested: S124RDR-H1195D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060770  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1195D940-X4F0-XX-UDD-BVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

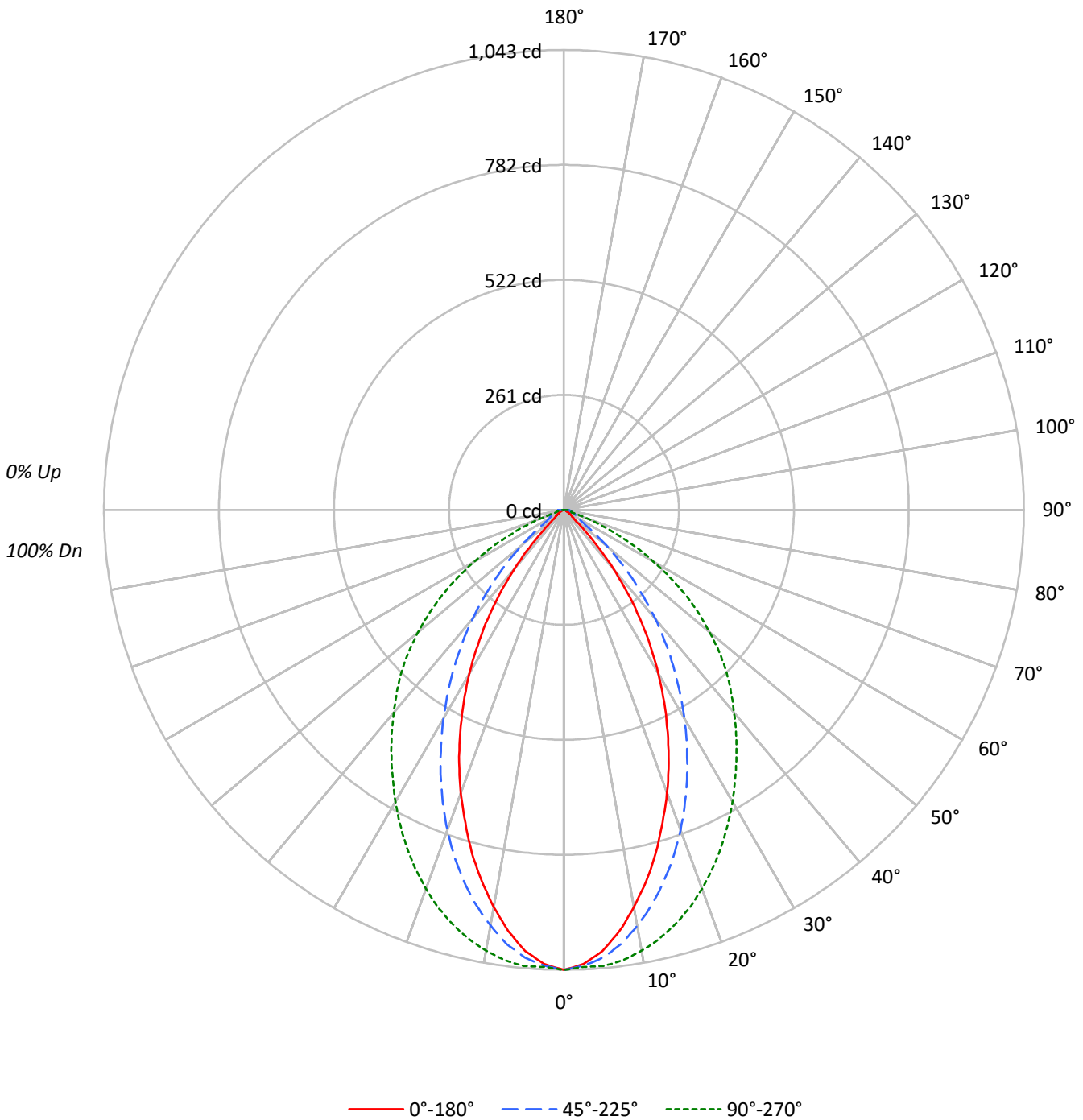
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1315.0 lumens  
Efficiency: N/A  
Efficacy: 36.0 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.5  
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				
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72				
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65				
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59				
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49				
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39				

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

	0°	45°	90°
0°	8985	8985	8985
5°	8680	8807	8977
10°	7999	8374	8877
15°	7184	7784	8680
20°	6263	7081	8383
25°	5283	6283	8017
30°	4262	5431	7599
35°	3154	4544	7170
40°	1955	3621	6746
45°	776	2640	6353
50°	344	1657	5775
55°	276	865	5056
60°	189	654	4028
65°	124	648	2769
70°	123	587	1294
75°	163	569	569
80°	243	669	669
85°	484	1334	968

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6353 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.7	7.3
10°-20°	247.0	18.8
20°-30°	311.8	23.7
30°-40°	286.1	21.8
40°-50°	194.8	14.8
50°-60°	106.1	8.1
60°-70°	45.9	3.5
70°-80°	16.7	1.3
80°-90°	10.8	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°	654.5	49.8
0°-40°	940.6	71.5
0°-60°	1241.6	94.4
0°-90°	1315.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1315.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1043	1043	1043	1043	1043	
5°	1004	1018	1019	1030	1038	93
15°	806	834	873	936	974	224
25°	556	595	661	767	844	254
35°	300	344	432	570	682	185
45°	64	106	217	384	522	59
55°	18	20	58	212	337	16
65°	6	9	32	66	136	7
75°	5	16	17	17	17	5
85°	5	11	14	14	10	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1043.4	1043.4	1043.4	1043.4	1043.4
2.5°	1031.1	1043.4	1034.8	1037.3	1037.3
5°	1004.2	1017.7	1018.9	1029.9	1038.5
7.5°	963.8	983.4	993.2	1015.2	1029.9
10°	914.8	938.1	957.7	995.6	1015.2
12.5°	862.1	889.1	918.5	968.7	996.9
15°	805.8	834.0	873.2	935.6	973.6
17.5°	743.4	777.6	825.4	900.1	946.6
20°	683.4	717.6	772.7	857.3	914.8
22.5°	620.9	656.4	717.6	811.9	880.5
25°	556.0	595.2	661.3	766.6	843.8
27.5°	492.3	533.9	603.7	718.9	804.6
30°	428.6	470.3	546.2	669.9	764.2
32.5°	363.7	406.6	488.6	618.4	722.5
35°	300.0	344.1	432.3	569.5	682.1
37.5°	235.1	281.7	376.0	521.7	641.7
40°	173.9	220.4	322.1	473.9	600.1
42.5°	116.3	162.9	267.0	427.4	560.9
45°	63.7	106.5	216.8	384.5	521.7
47.5°	34.3	58.8	167.8	342.9	477.6
50°	25.7	31.8	123.7	298.8	431.1
52.5°	22.0	24.5	85.7	252.3	384.5
55°	18.4	19.6	57.6	211.9	336.8
57.5°	14.7	15.9	42.9	171.5	285.3
60°	11.0	13.5	38.0	132.3	233.9
62.5°	8.6	11.0	35.5	96.7	184.9
65°	6.1	8.6	31.8	66.1	135.9
67.5°	6.1	9.8	26.9	42.9	91.8
70°	4.9	13.5	23.3	28.2	51.4
72.5°	4.9	14.7	19.6	19.6	19.6
75°	4.9	15.9	17.1	17.1	17.1
77.5°	4.9	14.7	15.9	14.7	14.7
80°	4.9	13.5	13.5	13.5	13.5
82.5°	4.9	12.2	13.5	13.5	11.0
85°	4.9	11.0	13.5	13.5	9.8
87.5°	3.7	11.0	12.2	12.2	7.3
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	0.00	0.00	0.00	0.25	0.56	16.04	17.32	16.40	17.63	17.94
	3H	0.09	1.22	0.47	1.55	1.92	16.41	17.54	16.79	17.88	18.24
	4H	1.31	2.36	1.71	2.71	3.10	16.39	17.44	16.79	17.80	18.18
	6H	2.49	3.46	2.91	3.83	4.22	16.38	17.35	16.80	17.72	18.11
	8H	3.08	4.00	3.51	4.39	4.79	16.38	17.29	16.81	17.69	18.09
	12H	3.75	4.63	4.19	5.01	5.44	16.39	17.27	16.83	17.65	18.08
4H	2H	2.27	3.33	2.68	3.68	4.06	15.85	16.90	16.25	17.25	17.64
	3H	3.86	4.72	4.28	5.13	5.53	16.27	17.13	16.68	17.53	17.94
	4H	5.16	5.92	5.59	6.34	6.79	16.27	17.03	16.70	17.45	17.90
	6H	6.29	6.95	6.75	7.40	7.86	16.31	16.97	16.77	17.42	17.88
	8H	6.80	7.41	7.27	7.86	8.33	16.33	16.95	16.80	17.40	17.87
	12H	7.35	7.89	7.83	8.37	8.85	16.40	16.94	16.89	17.43	17.90
8H	4H	6.24	6.86	6.71	7.31	7.78	16.18	16.79	16.65	17.24	17.71
	6H	7.79	8.29	8.29	8.79	9.27	16.26	16.76	16.76	17.26	17.74
	8H	8.59	9.05	9.12	9.56	10.06	16.34	16.79	16.86	17.31	17.80
	12H	9.42	9.82	9.94	10.32	10.89	16.51	16.91	17.02	17.41	17.98
12H	4H	6.43	6.98	6.92	7.46	7.93	16.14	16.68	16.63	17.17	17.64
	6H	8.14	8.60	8.67	9.12	9.61	16.23	16.68	16.75	17.20	17.69
	8H	9.15	9.56	9.67	10.05	10.62	16.37	16.77	16.88	17.26	17.84