

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: P1060747

Luminaire Tested: S124RDR-H1195D927-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060747  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1195D927-X4F0-XX-UDD-WVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

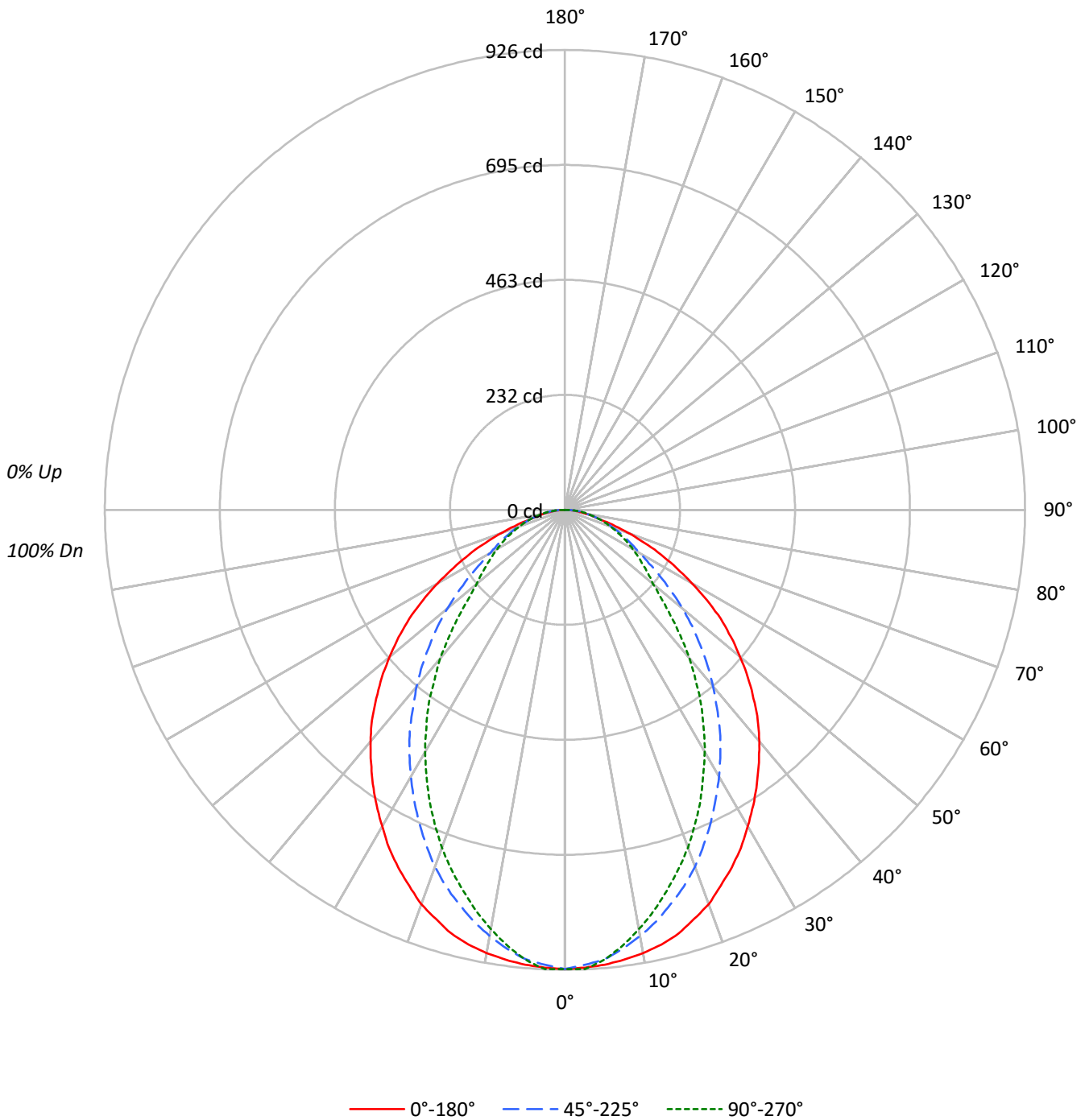
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1782.9 lumens  
Efficiency: N/A  
Efficacy: 48.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12  
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			100	
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86			86	
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74			74	
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64			64	
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56			56	
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50	
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44			44	
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40			40	
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36			36	
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33			33	
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30			30	

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

	0°	45°	90°
0°	7962	7962	7962
5°	7946	7851	7861
10°	7924	7619	7496
15°	7875	7333	7071
20°	7746	7009	6631
25°	7547	6597	6132
30°	7314	6169	5596
35°	7082	5723	5026
40°	6840	5216	4385
45°	6536	4684	3666
50°	6172	4134	3100
55°	5742	3507	2870
60°	5089	2976	2713
65°	4340	2745	2567
70°	3391	2543	2435
75°	2312	2349	2349
80°	1993	2207	2261
85°	1719	2144	2361

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6536 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.0	4.8
10°-20°	233.6	13.1
20°-30°	324.3	18.2
30°-40°	347.7	19.5
40°-50°	308.0	17.3
50°-60°	232.1	13.0
60°-70°	150.3	8.4
70°-80°	77.1	4.3
80°-90°	23.7	1.3
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°	644.0	36.1
0°-40°	991.7	55.6
0°-60°	1531.8	85.9
0°-90°	1782.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1782.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	919	920	908	909	909	87
15°	883	864	822	802	793	249
25°	794	752	694	657	645	365
35°	674	613	544	496	478	421
45°	537	467	385	325	301	414
55°	382	318	234	197	191	340
65°	213	172	135	127	126	211
75°	70	73	71	71	71	82
85°	17	18	22	24	24	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	924.6	924.6	924.6	924.6	924.6
2.5°	922.5	925.7	917.0	923.6	925.7
5°	919.2	920.3	908.3	909.4	909.4
7.5°	913.8	911.6	892.0	886.6	885.5
10°	906.2	899.7	871.4	860.5	857.3
12.5°	896.4	884.4	848.6	833.4	826.9
15°	883.4	863.8	822.5	801.9	793.2
17.5°	863.8	838.8	795.3	769.3	759.5
20°	845.3	811.6	764.9	732.3	723.6
22.5°	819.2	783.4	730.2	695.4	684.5
25°	794.3	751.9	694.3	657.4	645.4
27.5°	767.1	719.3	657.4	618.2	603.0
30°	735.6	684.5	620.4	579.1	562.8
32.5°	705.2	650.8	582.4	536.7	519.4
35°	673.7	612.8	544.4	495.5	478.1
37.5°	641.1	577.0	502.0	454.2	431.4
40°	608.5	541.1	464.0	409.6	390.1
42.5°	574.8	504.2	424.8	368.3	343.3
45°	536.7	467.2	384.6	324.9	301.0
47.5°	499.8	431.4	347.7	282.5	260.8
50°	460.7	393.3	308.6	245.6	231.4
52.5°	421.6	354.2	270.5	217.3	210.8
55°	382.5	318.4	233.6	196.7	191.2
57.5°	339.0	281.4	201.0	178.2	173.8
60°	295.5	241.2	172.8	160.8	157.5
62.5°	253.2	206.4	153.2	143.4	141.2
65°	213.0	171.7	134.7	127.1	126.0
67.5°	173.8	141.2	117.3	113.0	110.8
70°	134.7	113.0	101.0	98.9	96.7
72.5°	100.0	91.3	85.8	84.7	83.7
75°	69.5	72.8	70.6	70.6	70.6
77.5°	55.4	56.5	57.6	58.7	57.6
80°	40.2	43.5	44.5	46.7	45.6
82.5°	28.2	30.4	33.7	34.8	35.9
85°	17.4	18.5	21.7	23.9	23.9
87.5°	7.6	8.7	10.9	13.0	14.1
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	17.65	19.15	18.01	19.46	19.77	14.21	15.71	14.58	16.02	16.34
	3H	18.85	20.20	19.23	20.52	20.89	15.91	17.25	16.29	17.58	17.94
	4H	19.16	20.42	19.56	20.77	21.15	16.59	17.84	16.99	18.19	18.57
	6H	19.36	20.52	19.77	20.89	21.28	17.13	18.30	17.55	18.66	19.06
	8H	19.42	20.53	19.85	20.92	21.32	17.35	18.46	17.78	18.85	19.25
	12H	19.45	20.51	19.88	20.89	21.32	17.52	18.58	17.96	18.97	19.40
4H	2H	17.79	19.05	18.19	19.40	19.78	14.87	16.13	15.27	16.48	16.86
	3H	19.19	20.24	19.60	20.64	21.04	16.78	17.83	17.19	18.23	18.63
	4H	19.62	20.56	20.05	20.97	21.41	17.58	18.52	18.02	18.94	19.38
	6H	19.94	20.76	20.40	21.20	21.66	18.27	19.09	18.73	19.53	19.99
	8H	20.04	20.80	20.50	21.25	21.72	18.54	19.31	19.01	19.75	20.22
	12H	20.11	20.79	20.59	21.27	21.74	18.78	19.46	19.26	19.94	20.41
8H	4H	19.74	20.51	20.21	20.95	21.42	17.90	18.66	18.36	19.11	19.58
	6H	20.17	20.80	20.66	21.29	21.77	18.73	19.36	19.23	19.85	20.33
	8H	20.32	20.89	20.84	21.40	21.89	19.09	19.66	19.61	20.17	20.66
	12H	20.45	20.95	20.96	21.45	22.01	19.43	19.93	19.94	20.42	20.99
12H	4H	19.75	20.43	20.23	20.91	21.38	17.93	18.61	18.41	19.09	19.56
	6H	20.19	20.76	20.70	21.27	21.76	18.79	19.36	19.30	19.87	20.36
	8H	20.40	20.90	20.91	21.39	21.96	19.22	19.72	19.73	20.22	20.78