

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: P1060732

Luminaire Tested: S124RDR-H1195D850-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060732  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-39)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1195D850-X4F0-XX-UDD-BVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

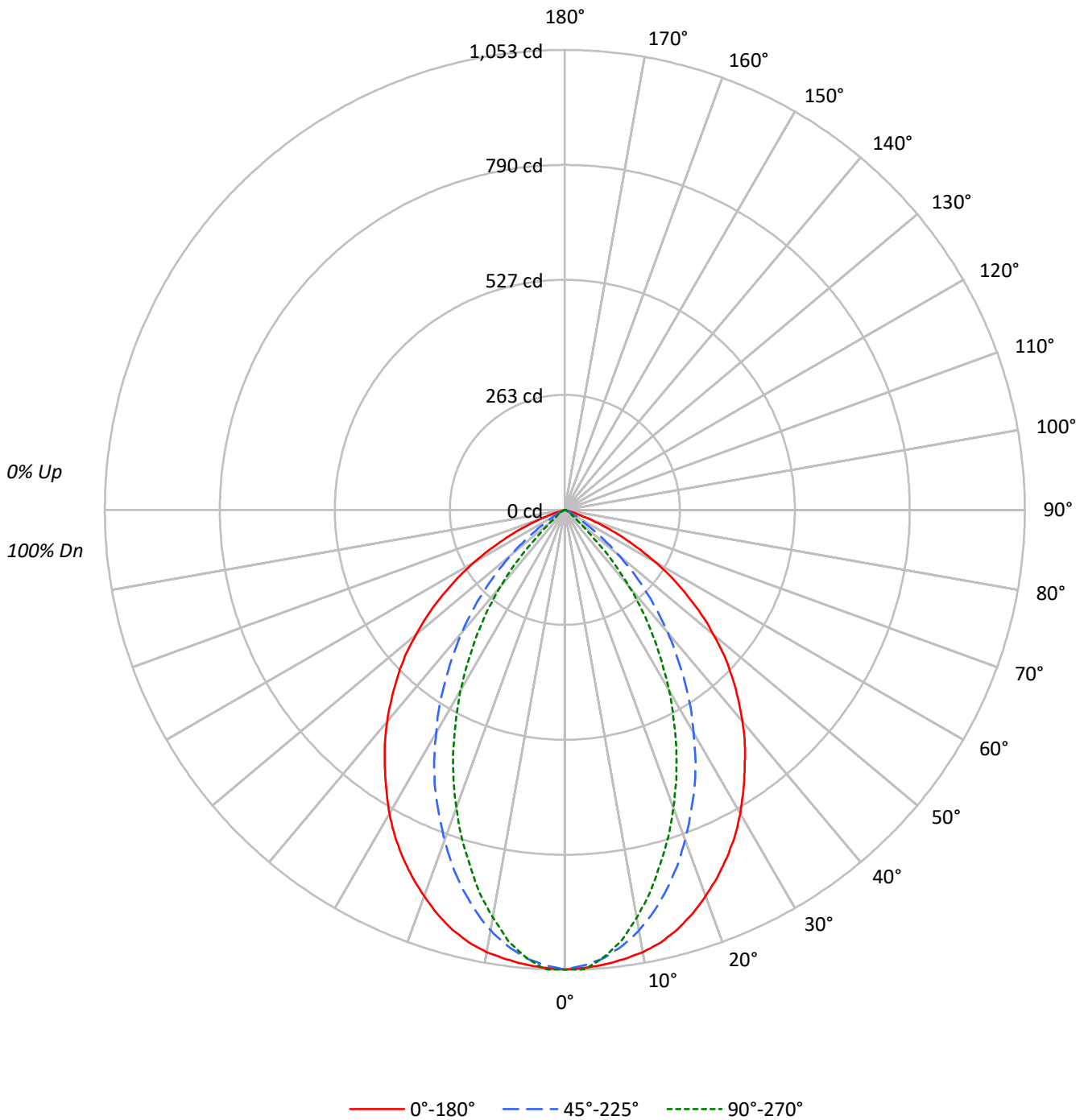
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1374.4 lumens  
Efficiency: N/A  
Efficacy: 37.7 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98  
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	112	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82				82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46				46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39				39

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

	0°	45°	90°
0°	9064	9064	9064
5°	9033	8902	8889
10°	8991	8552	8286
15°	8869	8028	7499
20°	8628	7374	6649
25°	8339	6677	5738
30°	7985	5854	4749
35°	7548	5021	3694
40°	7113	4121	2582
45°	6594	3167	1279
50°	5951	2139	427
55°	5137	1096	297
60°	4113	393	210
65°	2820	216	94
70°	1264	116	76
75°	0	50	50
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6594 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.2	7.1
10°-20°	254.8	18.5
20°-30°	329.9	24.0
30°-40°	313.4	22.8
40°-50°	221.9	16.1
50°-60°	113.9	8.3
60°-70°	39.8	2.9
70°-80°	3.4	0.3
80°-90°	0.0	0.0
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°	681.9	49.6
0°-40°	995.3	72.4
0°-60°	1331.1	96.9
0°-90°	1374.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1374.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1045	1046	1030	1030	1028	99
15°	995	964	900	858	841	280
25°	878	809	703	628	604	404
35°	718	613	478	385	351	449
45°	542	417	260	149	105	417
55°	342	225	73	21	20	306
65°	138	67	11	6	5	138
75°	0	2	2	2	2	11
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1049.5	1052.6	1043.5	1051.1	1052.6
5°	1045.0	1046.5	1029.8	1029.8	1028.3
7.5°	1037.4	1034.3	1007.0	996.3	994.8
10°	1028.3	1017.6	978.1	955.2	947.6
12.5°	1014.6	994.8	941.5	908.1	899.0
15°	994.8	964.4	900.5	857.9	841.2
17.5°	970.4	930.9	854.8	803.1	786.4
20°	941.5	891.4	804.7	746.9	725.6
22.5°	911.1	853.3	752.9	687.5	666.2
25°	877.7	809.2	702.7	628.2	603.9
27.5°	842.7	762.1	648.0	570.4	538.5
30°	803.1	714.9	588.7	508.0	477.6
32.5°	760.5	663.2	535.4	448.7	412.2
35°	718.0	613.0	477.6	384.8	351.4
37.5°	676.9	565.8	419.8	322.5	290.5
40°	632.8	514.1	366.6	266.2	229.7
42.5°	587.1	463.9	311.8	208.4	168.8
45°	541.5	416.8	260.1	149.1	105.0
47.5°	495.9	366.6	209.9	94.3	56.3
50°	444.2	317.9	159.7	50.2	31.9
52.5°	395.5	272.3	114.1	28.9	24.3
55°	342.2	225.1	73.0	21.3	19.8
57.5°	292.0	179.5	41.1	16.7	15.2
60°	238.8	138.4	22.8	13.7	12.2
62.5°	185.6	100.4	15.2	9.1	7.6
65°	138.4	66.9	10.6	6.1	4.6
67.5°	91.3	38.0	7.6	3.0	3.0
70°	50.2	18.3	4.6	3.0	3.0
72.5°	18.3	6.1	3.0	1.5	1.5
75°	0.0	1.5	1.5	1.5	1.5
77.5°	0.0	0.0	0.0	0.0	1.5
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	16.19	17.44	16.55	17.76	18.07	0.00	0.10	0.00	0.41	0.73
	3H	16.47	17.57	16.85	17.90	18.27	0.00	0.02	0.00	0.35	0.72
	4H	16.39	17.41	16.79	17.76	18.15	0.00	0.00	0.00	0.27	0.66
	6H	16.30	17.24	16.72	17.61	18.01	0.00	0.00	0.00	0.15	0.55
	8H	16.26	17.14	16.69	17.53	17.94	0.00	0.00	0.00	0.07	0.48
	12H	16.21	17.06	16.64	17.44	17.87	0.00	0.00	0.00	0.00	0.41
4H	2H	15.96	16.99	16.36	17.34	17.72	0.00	0.33	0.00	0.68	1.06
	3H	16.24	17.07	16.66	17.48	17.88	0.00	0.26	0.00	0.67	1.07
	4H	16.15	16.89	16.59	17.31	17.75	0.00	0.15	0.00	0.57	1.02
	6H	16.06	16.69	16.53	17.14	17.61	0.00	0.00	0.00	0.43	0.90
	8H	16.00	16.59	16.47	17.04	17.51	0.00	0.00	0.00	0.33	0.80
	12H	15.95	16.47	16.44	16.95	17.43	0.00	0.00	0.00	0.24	0.72
8H	4H	16.00	16.59	16.47	17.04	17.51	0.00	0.07	0.00	0.51	0.99
	6H	15.89	16.37	16.40	16.87	17.35	0.00	0.00	0.00	0.37	0.85
	8H	15.83	16.26	16.35	16.77	17.27	0.00	0.00	0.00	0.27	0.77
	12H	15.78	16.16	16.29	16.65	17.23	0.00	0.00	0.00	0.15	0.72
12H	4H	15.95	16.47	16.44	16.95	17.43	0.00	0.00	0.00	0.43	0.90
	6H	15.83	16.26	16.35	16.77	17.27	0.00	0.00	0.00	0.27	0.77
	8H	15.78	16.16	16.29	16.65	17.23	0.00	0.00	0.00	0.15	0.72