

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: P1060977

Luminaire Tested: S124RDR-H795D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060977  
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-H795D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

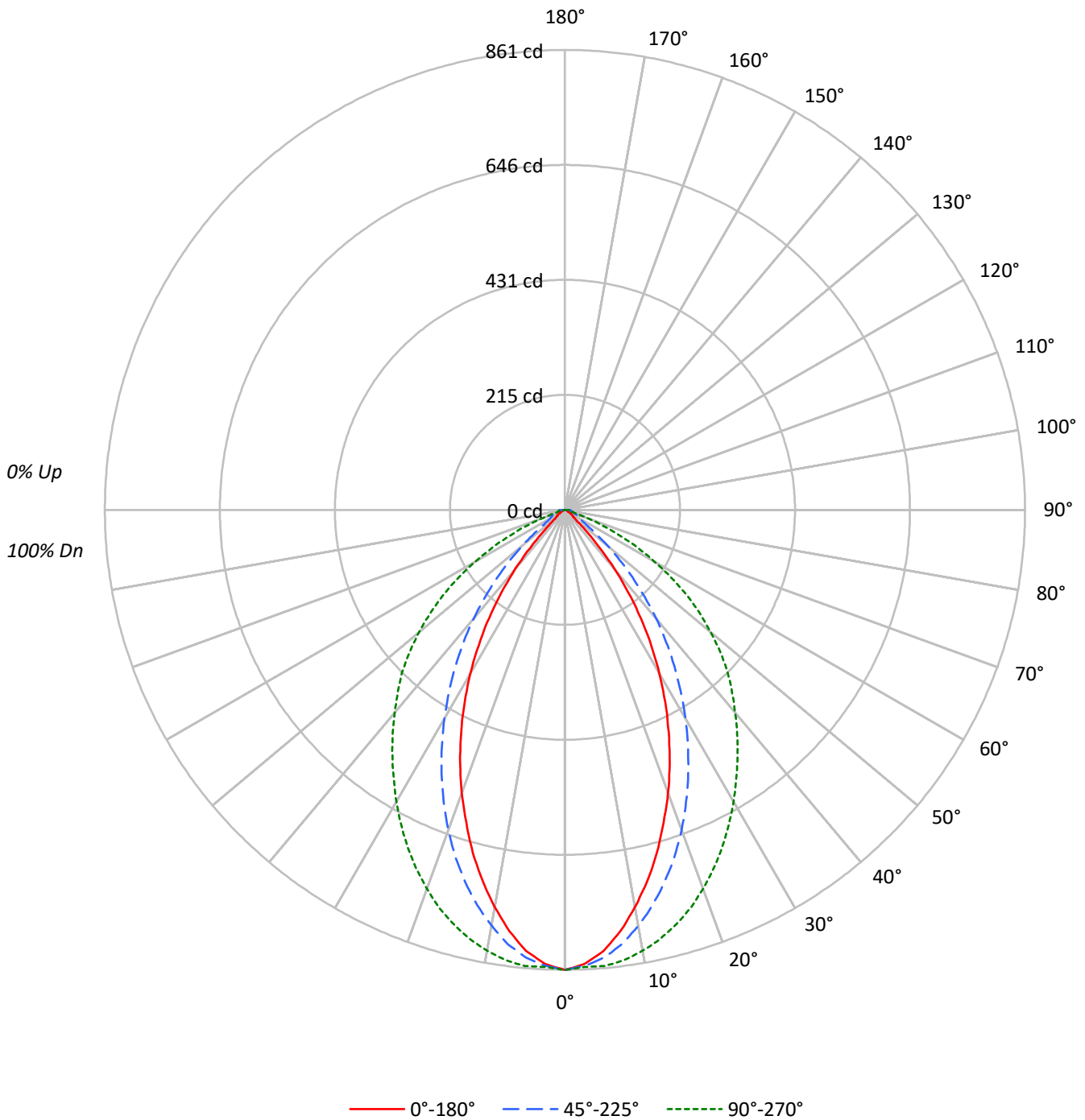
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1085.6 lumens  
Efficiency: N/A  
Efficacy: 46.2 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): 23.5  
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									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	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°	7417	7417	7417
5°	7166	7270	7411
10°	6603	6913	7328
15°	5930	6426	7165
20°	5169	5846	6920
25°	4361	5187	6619
30°	3518	4483	6272
35°	2604	3752	5919
40°	1614	2989	5569
45°	641	2179	5245
50°	284	1368	4768
55°	228	713	4174
60°	157	539	3326
65°	104	536	2286
70°	101	483	1070
75°	133	472	472
80°	198	550	550
85°	395	1097	800

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5245 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.0	7.3
10°-20°	203.9	18.8
20°-30°	257.4	23.7
30°-40°	236.2	21.8
40°-50°	160.8	14.8
50°-60°	87.6	8.1
60°-70°	37.9	3.5
70°-80°	13.8	1.3
80°-90°	8.9	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°	540.3	49.8
0°-40°	776.5	71.5
0°-60°	1024.9	94.4
0°-90°	1085.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1085.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	829	840	841	850	857	77
15°	665	688	721	772	804	185
25°	459	491	546	633	697	210
35°	248	284	357	470	563	153
45°	53	88	179	317	431	49
55°	15	16	48	175	278	13
65°	5	7	26	55	112	6
75°	4	13	14	14	14	4
85°	4	9	11	11	8	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	861.3	861.3	861.3	861.3	861.3
2.5°	851.2	861.3	854.3	856.3	856.3
5°	829.0	840.1	841.1	850.2	857.3
7.5°	795.6	811.8	819.9	838.1	850.2
10°	755.2	774.4	790.6	821.9	838.1
12.5°	711.7	734.0	758.2	799.7	822.9
15°	665.2	688.5	720.8	772.4	803.7
17.5°	613.7	642.0	681.4	743.1	781.5
20°	564.1	592.4	637.9	707.7	755.2
22.5°	512.6	541.9	592.4	670.3	726.9
25°	459.0	491.3	545.9	632.9	696.6
27.5°	406.4	440.8	498.4	593.4	664.2
30°	353.8	388.2	450.9	553.0	630.8
32.5°	300.3	335.6	403.4	510.5	596.5
35°	247.7	284.1	356.9	470.1	563.1
37.5°	194.1	232.5	310.4	430.7	529.7
40°	143.6	182.0	265.9	391.2	495.4
42.5°	96.0	134.5	220.4	352.8	463.0
45°	52.6	88.0	178.9	317.4	430.7
47.5°	28.3	48.5	138.5	283.1	394.3
50°	21.2	26.3	102.1	246.7	355.9
52.5°	18.2	20.2	70.8	208.3	317.4
55°	15.2	16.2	47.5	174.9	278.0
57.5°	12.1	13.1	35.4	141.5	235.6
60°	9.1	11.1	31.3	109.2	193.1
62.5°	7.1	9.1	29.3	79.9	152.7
65°	5.1	7.1	26.3	54.6	112.2
67.5°	5.1	8.1	22.2	35.4	75.8
70°	4.0	11.1	19.2	23.3	42.5
72.5°	4.0	12.1	16.2	16.2	16.2
75°	4.0	13.1	14.2	14.2	14.2
77.5°	4.0	12.1	13.1	12.1	12.1
80°	4.0	11.1	11.1	11.1	11.1
82.5°	4.0	10.1	11.1	11.1	9.1
85°	4.0	9.1	11.1	11.1	8.1
87.5°	3.0	9.1	10.1	10.1	6.1
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	0.00	0.00	0.00	0.00	0.00	15.37	16.65	15.74	16.96	17.28
	3H	0.00	0.55	0.00	0.88	1.24	15.75	16.88	16.13	17.21	17.57
	4H	0.62	1.68	1.03	2.03	2.41	15.72	16.78	16.13	17.13	17.51
	6H	1.80	2.77	2.21	3.14	3.53	15.71	16.68	16.13	17.05	17.44
	8H	2.39	3.30	2.82	3.69	4.10	15.71	16.63	16.14	17.02	17.42
	12H	3.05	3.93	3.49	4.31	4.74	15.73	16.60	16.16	16.98	17.41
4H	2H	1.61	2.66	2.01	3.01	3.40	15.18	16.23	15.58	16.58	16.97
	3H	3.20	4.05	3.61	4.46	4.86	15.60	16.46	16.01	16.86	17.27
	4H	4.48	5.25	4.92	5.67	6.11	15.60	16.37	16.04	16.79	17.23
	6H	5.60	6.27	6.07	6.71	7.18	15.64	16.30	16.10	16.75	17.22
	8H	6.11	6.73	6.58	7.18	7.65	15.67	16.28	16.14	16.73	17.20
	12H	6.66	7.20	7.15	7.69	8.16	15.73	16.28	16.22	16.76	17.24
8H	4H	5.57	6.19	6.04	6.64	7.11	15.51	16.13	15.98	16.57	17.05
	6H	7.11	7.61	7.61	8.11	8.59	15.59	16.09	16.09	16.59	17.07
	8H	7.91	8.37	8.44	8.89	9.38	15.67	16.13	16.19	16.64	17.13
	12H	8.75	9.15	9.26	9.64	10.21	15.84	16.24	16.36	16.74	17.31
12H	4H	5.76	6.30	6.25	6.79	7.26	15.47	16.02	15.96	16.50	16.98
	6H	7.46	7.92	7.99	8.43	8.93	15.56	16.02	16.08	16.53	17.02
	8H	8.47	8.88	8.99	9.37	9.94	15.70	16.10	16.21	16.59	17.17