

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060641

Luminaire Tested: S124RDRP-H1020D835-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060641  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H1020D835-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

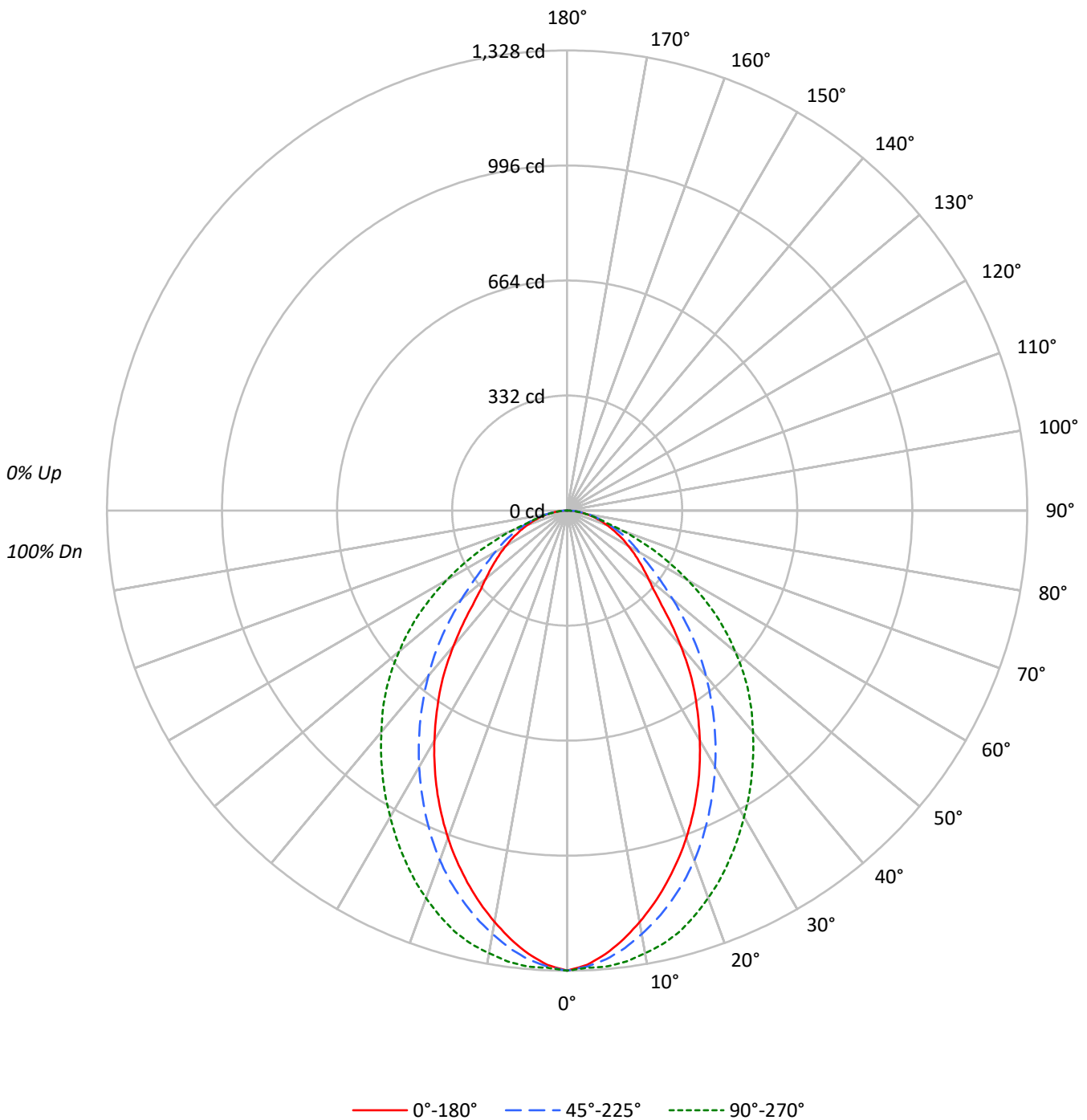
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2436.1 lumens  
Efficiency: N/A  
Efficacy: 78.1 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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	108	104	100	97	100	97	94	96	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67					65				
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38					37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35					33				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32					31				

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

	0°	45°	90°
0°	11432	11432	11432
5°	11101	11233	11415
10°	10541	10849	11342
15°	9909	10390	11208
20°	9216	9841	10907
25°	8450	9188	10549
30°	7617	8494	10152
35°	6744	7769	9770
40°	5732	7013	9377
45°	4693	6195	9014
50°	4109	5320	8484
55°	3774	4586	7849
60°	3501	4128	6920
65°	3280	3877	5793
70°	3077	3550	4348
75°	2891	3244	3167
80°	2678	2970	2678
85°	2440	2905	2322

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9014 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.7	5.0
10°-20°	330.1	13.6
20°-30°	451.3	18.5
30°-40°	474.3	19.5
40°-50°	411.6	16.9
50°-60°	310.4	12.7
60°-70°	201.2	8.3
70°-80°	103.3	4.2
80°-90°	31.3	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°	904.1	37.1
0°-40°	1378.3	56.6
0°-60°	2100.3	86.2
0°-90°	2436.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2436.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1284	1302	1300	1310	1321	120
15°	1112	1138	1166	1218	1257	312
25°	889	921	967	1041	1110	408
35°	642	677	739	838	929	399
45°	385	422	509	636	740	303
55°	251	258	306	434	523	226
65°	161	164	190	230	284	160
75°	87	98	98	99	95	92
85°	25	30	29	28	24	28
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1327.6	1327.6	1327.6	1327.6	1327.6
2.5°	1312.4	1328.8	1317.1	1319.4	1320.6
5°	1284.2	1301.8	1299.5	1310.0	1320.6
7.5°	1247.8	1268.9	1273.6	1294.8	1312.4
10°	1205.5	1229.0	1240.7	1274.8	1297.1
12.5°	1160.8	1184.3	1205.5	1248.9	1280.7
15°	1111.5	1138.5	1165.5	1218.4	1257.2
17.5°	1059.8	1088.0	1122.0	1179.6	1225.4
20°	1005.7	1033.9	1073.9	1136.1	1190.2
22.5°	948.2	979.9	1022.2	1089.1	1152.6
25°	889.4	921.1	967.0	1041.0	1110.3
27.5°	828.3	861.2	910.6	992.8	1066.8
30°	766.0	801.3	854.2	941.1	1021.0
32.5°	702.6	740.2	796.6	889.4	976.3
35°	641.5	676.7	739.0	837.7	929.4
37.5°	578.1	613.3	680.3	787.2	882.4
40°	509.9	548.7	623.9	734.3	834.2
42.5°	446.5	485.2	566.3	683.8	788.4
45°	385.4	421.8	508.7	635.6	740.2
47.5°	338.4	364.2	451.2	588.6	688.5
50°	306.7	318.4	397.1	536.9	633.3
52.5°	278.5	287.9	347.8	485.2	579.2
55°	251.4	258.5	305.5	433.5	522.8
57.5°	227.9	231.5	267.9	381.8	461.7
60°	203.3	208.0	239.7	329.0	401.8
62.5°	183.3	185.6	215.0	278.5	341.9
65°	161.0	164.5	190.3	230.3	284.3
67.5°	141.0	146.9	164.5	188.0	224.4
70°	122.2	130.4	141.0	152.7	172.7
72.5°	104.6	114.0	119.8	124.5	121.0
75°	86.9	97.5	97.5	98.7	95.2
77.5°	70.5	79.9	78.7	77.5	72.8
80°	54.0	62.3	59.9	58.7	54.0
82.5°	39.9	45.8	43.5	42.3	36.4
85°	24.7	30.5	29.4	28.2	23.5
87.5°	11.7	17.6	16.4	15.3	10.6
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	14.97	16.46	15.33	16.77	17.08	18.71	20.19	19.07	20.51	20.82
	3H	16.64	17.97	17.01	18.30	18.66	19.83	21.16	20.21	21.49	21.85
	4H	17.30	18.55	17.70	18.90	19.28	20.13	21.38	20.53	21.73	22.10
	6H	17.81	18.96	18.22	19.33	19.72	20.33	21.48	20.74	21.85	22.24
	8H	17.98	19.08	18.41	19.47	19.87	20.38	21.48	20.81	21.87	22.27
	12H	18.10	19.15	18.54	19.54	19.97	20.41	21.46	20.85	21.85	22.28
4H	2H	15.76	17.01	16.16	17.36	17.74	18.87	20.12	19.27	20.47	20.85
	3H	17.63	18.67	18.04	19.07	19.47	20.20	21.24	20.61	21.64	22.04
	4H	18.44	19.37	18.87	19.78	20.22	20.62	21.55	21.05	21.97	22.41
	6H	19.08	19.89	19.54	20.33	20.79	20.94	21.75	21.40	22.19	22.65
	8H	19.30	20.06	19.77	20.50	20.97	21.03	21.79	21.50	22.24	22.70
	12H	19.47	20.14	19.95	20.62	21.09	21.11	21.78	21.59	22.26	22.73
8H	4H	18.78	19.54	19.25	19.99	20.45	20.75	21.51	21.22	21.95	22.42
	6H	19.57	20.20	20.07	20.69	21.17	21.17	21.80	21.67	22.29	22.77
	8H	19.89	20.45	20.41	20.96	21.45	21.33	21.89	21.84	22.40	22.89
	12H	20.16	20.65	20.67	21.14	21.71	21.47	21.96	21.98	22.45	23.02
12H	4H	18.81	19.49	19.30	19.97	20.44	20.76	21.43	21.24	21.91	22.38
	6H	19.64	20.20	20.15	20.71	21.20	21.19	21.75	21.71	22.26	22.75
	8H	20.02	20.52	20.53	21.01	21.57	21.40	21.90	21.91	22.39	22.96