

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: P1060251

Luminaire Tested: S124RDRP-S1020D850-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060251  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S1020D850-X4F0-XX-UDD-SVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

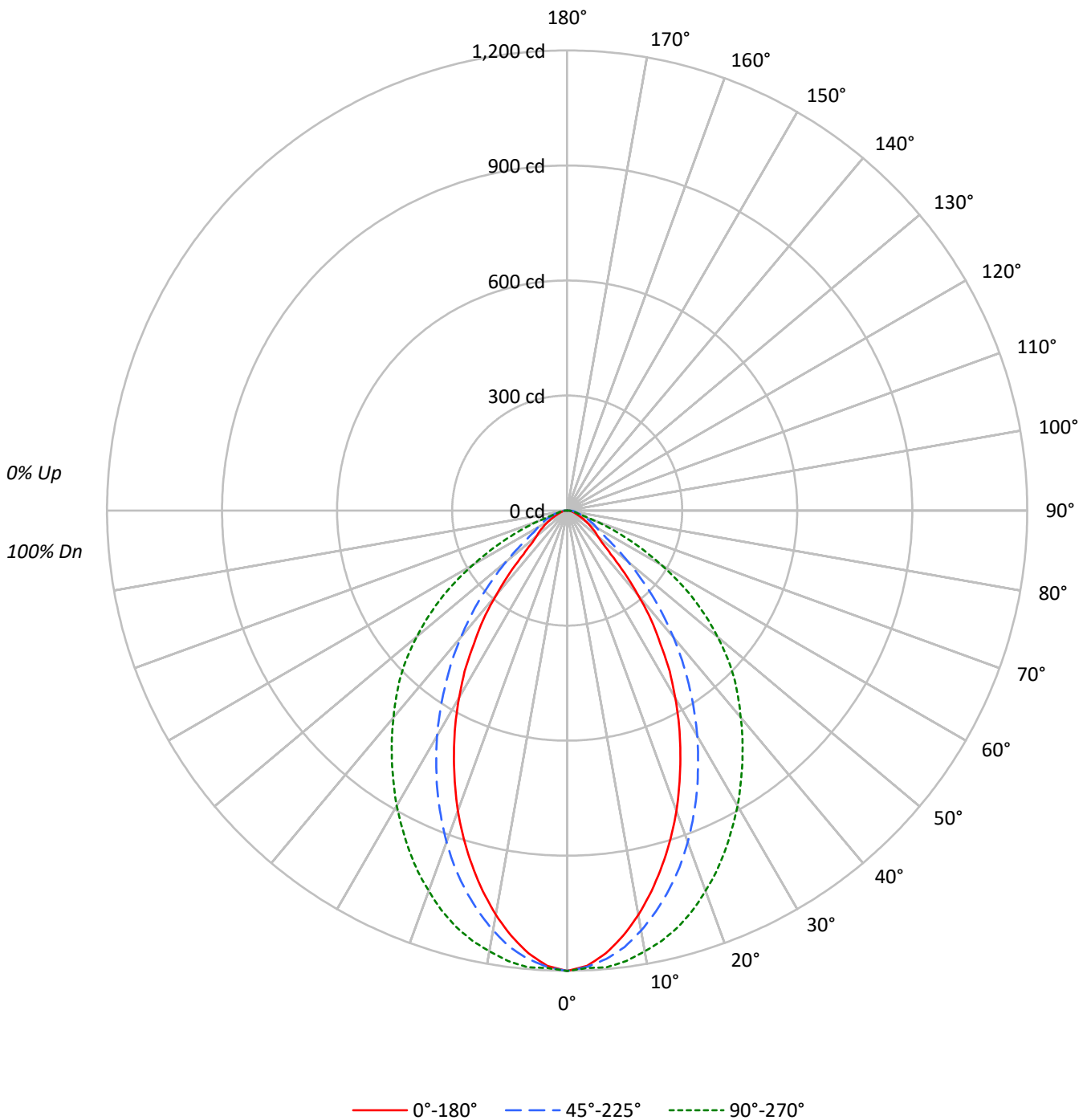
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1699.1 lumens  
Efficiency: N/A  
Efficacy: 48.5 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 35  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57
6	79	67	60	54	77	67	59	54	65	59	54	63	58	53	62	57	53	51
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	10338	10338	10338
5°	10018	10145	10330
10°	9359	9722	10203
15°	8538	9135	10009
20°	7633	8432	9673
25°	6640	7621	9278
30°	5601	6749	8843
35°	4455	5809	8375
40°	3242	4840	7916
45°	1961	3823	7498
50°	1401	2768	6864
55°	1188	1872	6061
60°	970	1524	4898
65°	766	1367	3525
70°	642	1148	1858
75°	579	1071	938
80°	600	1066	932
85°	790	1591	1057

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7498 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.5	6.5
10°-20°	289.6	17.0
20°-30°	375.6	22.1
30°-40°	361.6	21.3
40°-50°	269.0	15.8
50°-60°	165.4	9.7
60°-70°	81.2	4.8
70°-80°	31.7	1.9
80°-90°	14.5	0.9
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°	775.7	45.7
0°-40°	1137.3	66.9
0°-60°	1571.7	92.5
0°-90°	1699.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1699.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1200	1200	1200	1200	1200	
5°	1159	1176	1174	1184	1195	108
15°	958	988	1025	1086	1123	268
25°	699	736	802	903	976	320
35°	424	464	553	691	797	265
45°	161	200	314	484	616	134
55°	79	82	125	284	404	71
65°	38	40	67	107	173	39
75°	17	31	32	30	28	19
85°	8	15	16	16	11	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1200.5	1200.5	1200.5	1200.5	1200.5
2.5°	1188.4	1201.8	1191.1	1192.4	1193.7
5°	1158.9	1176.3	1173.6	1184.4	1195.1
7.5°	1118.6	1138.8	1148.1	1169.6	1184.4
10°	1070.3	1093.1	1111.9	1146.8	1166.9
12.5°	1016.7	1043.5	1070.3	1117.3	1148.1
15°	957.7	988.5	1024.7	1086.4	1122.7
17.5°	897.3	928.2	975.1	1046.2	1091.8
20°	832.9	866.5	920.1	999.3	1055.6
22.5°	765.9	802.1	861.1	951.0	1018.0
25°	698.8	736.4	802.1	902.7	976.5
27.5°	631.7	668.0	739.0	851.7	932.2
30°	563.3	600.9	678.7	796.7	889.3
32.5°	497.6	532.5	615.7	744.4	842.3
35°	423.8	464.1	552.6	690.8	796.7
37.5°	360.8	397.0	492.3	637.1	751.1
40°	288.4	328.6	430.6	584.8	704.2
42.5°	221.3	261.6	371.5	532.5	659.9
45°	161.0	199.9	313.9	484.2	615.7
47.5°	122.1	144.9	257.5	437.3	566.0
50°	104.6	111.3	206.6	386.3	512.4
52.5°	92.5	95.2	161.0	335.3	458.7
55°	79.1	81.8	124.7	284.4	403.7
57.5°	67.1	68.4	100.6	236.1	344.7
60°	56.3	57.7	88.5	189.1	284.4
62.5°	46.9	48.3	79.1	146.2	226.7
65°	37.6	40.2	67.1	107.3	173.0
67.5°	30.8	36.2	56.3	75.1	120.7
70°	25.5	34.9	45.6	52.3	73.8
72.5°	21.5	32.2	38.9	37.6	36.2
75°	17.4	30.8	32.2	29.5	28.2
77.5°	14.8	26.8	26.8	24.1	22.8
80°	12.1	21.5	21.5	21.5	18.8
82.5°	10.7	17.4	18.8	18.8	14.8
85°	8.0	14.8	16.1	16.1	10.7
87.5°	5.4	13.4	14.8	13.4	8.0
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	7.90	9.24	8.26	9.55	9.87	17.07	18.41	17.43	18.72	19.04
	3H	9.01	10.20	9.39	10.53	10.90	17.58	18.77	17.95	19.10	19.46
	4H	9.53	10.64	9.93	10.99	11.37	17.60	18.71	18.00	19.06	19.44
	6H	9.96	10.98	10.38	11.35	11.75	17.61	18.63	18.02	19.00	19.39
	8H	10.15	11.12	10.58	11.51	11.92	17.61	18.58	18.04	18.97	19.37
	12H	10.33	11.26	10.76	11.64	12.07	17.61	18.54	18.04	18.92	19.35
4H	2H	9.05	10.16	9.45	10.51	10.89	16.96	18.07	17.36	18.42	18.80
	3H	10.39	11.30	10.80	11.70	12.10	17.55	18.46	17.96	18.86	19.27
	4H	11.12	11.93	11.55	12.35	12.79	17.61	18.42	18.04	18.84	19.28
	6H	11.73	12.43	12.19	12.88	13.34	17.68	18.39	18.15	18.83	19.30
	8H	11.97	12.63	12.44	13.07	13.54	17.71	18.37	18.18	18.82	19.29
	12H	12.21	12.79	12.69	13.27	13.74	17.76	18.34	18.24	18.82	19.29
8H	4H	11.59	12.24	12.05	12.69	13.16	17.57	18.22	18.04	18.67	19.14
	6H	12.44	12.98	12.94	13.47	13.95	17.69	18.23	18.20	18.73	19.21
	8H	12.84	13.33	13.36	13.84	14.33	17.78	18.26	18.30	18.78	19.27
	12H	13.27	13.69	13.78	14.19	14.76	17.90	18.33	18.41	18.82	19.39
12H	4H	11.64	12.22	12.13	12.70	13.18	17.54	18.12	18.03	18.60	19.08
	6H	12.57	13.05	13.09	13.57	14.06	17.68	18.16	18.20	18.67	19.17
	8H	13.09	13.52	13.61	14.01	14.58	17.81	18.24	18.32	18.73	19.30