

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: P1060254

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060254  
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-S1020D850-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

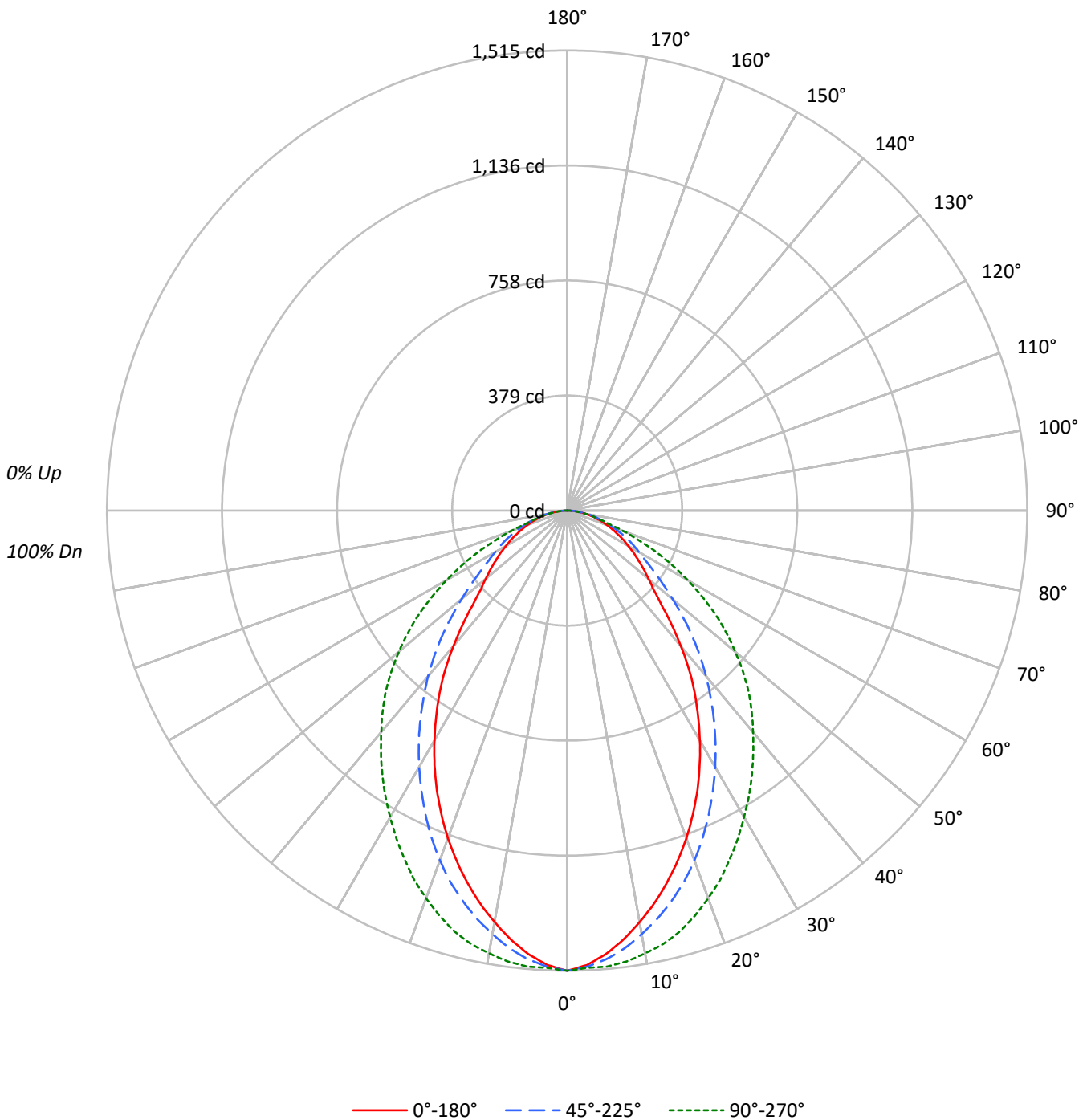
Lumens per Lamp: N/A  
Luminaire Lumens: 2780.1 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75													75															
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65													65															
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57													57															
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	50													50															
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45													45															
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40													40															
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37													37															
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33													33															
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31													31															

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

	0°	45°	90°
0°	13047	13047	13047
5°	12668	12818	13027
10°	12028	12380	12943
15°	11308	11857	12789
20°	10517	11230	12446
25°	9644	10484	12038
30°	8692	9692	11585
35°	7696	8865	11148
40°	6541	8002	10700
45°	5356	7071	10287
50°	4687	6071	9682
55°	4307	5234	8957
60°	3996	4710	7896
65°	3743	4426	6612
70°	3510	4051	4962
75°	3300	3703	3613
80°	3060	3392	3060
85°	2786	3310	2648

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10287 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.0	5.0
10°-20°	376.7	13.6
20°-30°	515.0	18.5
30°-40°	541.2	19.5
40°-50°	469.6	16.9
50°-60°	354.3	12.7
60°-70°	229.7	8.3
70°-80°	117.9	4.2
80°-90°	35.7	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°	1031.7	37.1
0°-40°	1572.9	56.6
0°-60°	2396.8	86.2
0°-90°	2780.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2780.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1515	1515	1515	1515	1515	
5°	1466	1486	1483	1495	1507	137
15°	1268	1299	1330	1390	1435	356
25°	1015	1051	1103	1188	1267	465
35°	732	772	843	956	1060	455
45°	440	481	581	725	845	346
55°	287	295	349	495	597	258
65°	184	188	217	263	324	183
75°	99	111	111	113	109	105
85°	28	35	34	32	27	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1515.1	1515.1	1515.1	1515.1	1515.1
2.5°	1497.6	1516.4	1503.0	1505.7	1507.0
5°	1465.5	1485.6	1482.9	1495.0	1507.0
7.5°	1423.9	1448.0	1453.4	1477.5	1497.6
10°	1375.6	1402.4	1415.8	1454.7	1480.2
12.5°	1324.7	1351.5	1375.6	1425.2	1461.4
15°	1268.4	1299.2	1330.0	1390.4	1434.6
17.5°	1209.4	1241.5	1280.4	1346.1	1398.4
20°	1147.7	1179.9	1225.5	1296.5	1358.2
22.5°	1082.0	1118.2	1166.5	1242.9	1315.3
25°	1015.0	1051.2	1103.4	1187.9	1267.0
27.5°	945.2	982.8	1039.1	1132.9	1217.4
30°	874.2	914.4	974.7	1074.0	1165.1
32.5°	801.8	844.7	909.0	1015.0	1114.2
35°	732.1	772.3	843.3	956.0	1060.5
37.5°	659.7	699.9	776.3	898.3	1006.9
40°	581.9	626.1	711.9	838.0	951.9
42.5°	509.5	553.7	646.2	780.3	899.7
45°	439.8	481.3	580.6	725.4	844.7
47.5°	386.1	415.6	514.9	671.7	785.7
50°	349.9	363.3	453.2	612.7	722.7
52.5°	317.8	328.5	396.9	553.7	661.0
55°	286.9	295.0	348.6	494.7	596.6
57.5°	260.1	264.1	305.7	435.7	526.9
60°	232.0	237.3	273.5	375.4	458.5
62.5°	209.2	211.8	245.4	317.8	390.2
65°	183.7	187.7	217.2	262.8	324.5
67.5°	160.9	167.6	187.7	214.5	256.1
70°	139.4	148.8	160.9	174.3	197.1
72.5°	119.3	130.1	136.8	142.1	138.1
75°	99.2	111.3	111.3	112.6	108.6
77.5°	80.4	91.2	89.8	88.5	83.1
80°	61.7	71.1	68.4	67.0	61.7
82.5°	45.6	52.3	49.6	48.3	41.6
85°	28.2	34.9	33.5	32.2	26.8
87.5°	13.4	20.1	18.8	17.4	12.1
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	15.43	16.91	15.79	17.23	17.54	19.16	20.65	19.53	20.96	21.28
	3H	17.09	18.43	17.47	18.75	19.12	20.29	21.62	20.67	21.95	22.31
	4H	17.76	19.01	18.16	19.36	19.74	20.59	21.84	20.99	22.18	22.56
	6H	18.27	19.42	18.68	19.79	20.18	20.79	21.94	21.20	22.31	22.70
	8H	18.44	19.54	18.87	19.93	20.33	20.84	21.94	21.27	22.33	22.73
	12H	18.56	19.61	18.99	20.00	20.42	20.87	21.92	21.30	22.31	22.74
4H	2H	16.22	17.47	16.62	17.82	18.20	19.33	20.58	19.73	20.93	21.31
	3H	18.09	19.13	18.50	19.53	19.93	20.66	21.70	21.07	22.10	22.50
	4H	18.89	19.83	19.33	20.24	20.68	21.08	22.01	21.51	22.43	22.86
	6H	19.54	20.35	20.00	20.79	21.25	21.40	22.21	21.86	22.65	23.11
	8H	19.76	20.52	20.23	20.96	21.43	21.49	22.25	21.96	22.69	23.16
	12H	19.93	20.60	20.41	21.08	21.55	21.57	22.24	22.05	22.72	23.19
8H	4H	19.24	20.00	19.71	20.44	20.91	21.21	21.97	21.67	22.41	22.88
	6H	20.03	20.66	20.53	21.15	21.63	21.63	22.25	22.13	22.75	23.22
	8H	20.35	20.91	20.87	21.42	21.91	21.79	22.35	22.30	22.86	23.35
	12H	20.62	21.11	21.13	21.60	22.17	21.93	22.42	22.44	22.91	23.48
12H	4H	19.27	19.95	19.76	20.43	20.90	21.22	21.89	21.70	22.37	22.84
	6H	20.09	20.66	20.61	21.17	21.66	21.65	22.21	22.17	22.72	23.21
	8H	20.48	20.98	20.99	21.47	22.03	21.86	22.36	22.37	22.85	23.41