

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: P1060734

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060734  
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-H1195D850-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: -

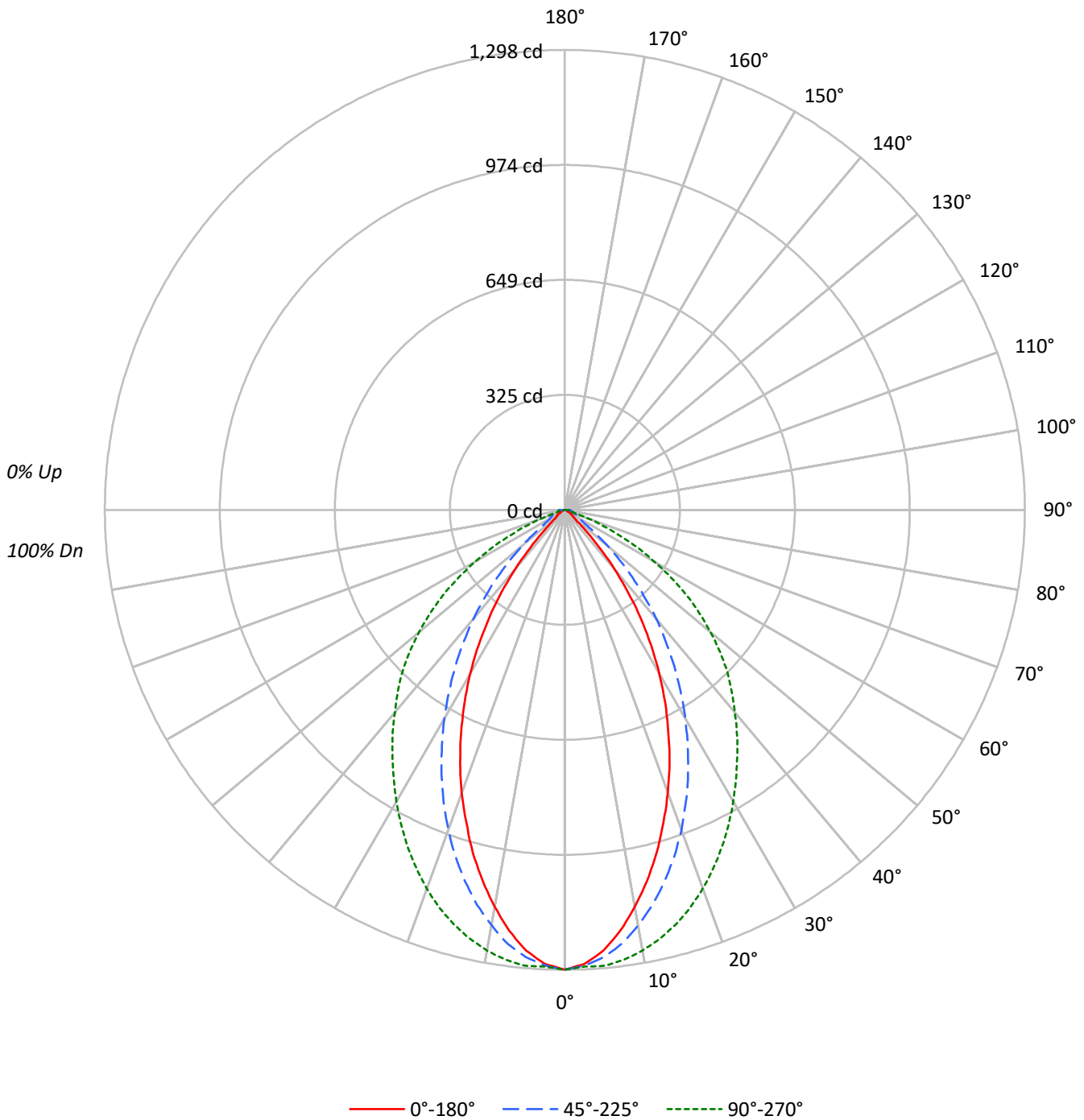
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1635.5 lumens  
Efficiency: N/A  
Efficacy: 44.8 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): 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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				90
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81				81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72				72
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65				65
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59				59
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49				49
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45				45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39				39

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

	0°	45°	90°
0°	11174	11174	11174
5°	10796	10954	11165
10°	9948	10414	11040
15°	8935	9681	10794
20°	7788	8807	10426
25°	6570	7815	9971
30°	5301	6754	9450
35°	3922	5651	8918
40°	2431	4503	8389
45°	964	3283	7901
50°	429	2060	7182
55°	342	1075	6287
60°	236	813	5010
65°	155	807	3446
70°	154	728	1611
75°	203	709	709
80°	302	833	833
85°	603	1660	1205

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7901 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.0	7.3
10°-20°	307.2	18.8
20°-30°	387.8	23.7
30°-40°	355.8	21.8
40°-50°	242.3	14.8
50°-60°	132.0	8.1
60°-70°	57.1	3.5
70°-80°	20.8	1.3
80°-90°	13.4	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°	814.0	49.8
0°-40°	1169.8	71.5
0°-60°	1544.1	94.4
0°-90°	1635.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1635.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1298	1298	1298	1298	1298	
5°	1249	1266	1267	1281	1292	116
15°	1002	1037	1086	1164	1211	279
25°	692	740	822	953	1049	316
35°	373	428	538	708	848	231
45°	79	132	270	478	649	74
55°	23	24	72	264	419	20
65°	8	11	40	82	169	9
75°	6	20	21	21	21	6
85°	6	14	17	17	12	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1297.6	1297.6	1297.6	1297.6	1297.6
2.5°	1282.4	1297.6	1287.0	1290.0	1290.0
5°	1248.9	1265.7	1267.2	1280.9	1291.6
7.5°	1198.6	1223.0	1235.2	1262.6	1280.9
10°	1137.7	1166.7	1191.0	1238.2	1262.6
12.5°	1072.2	1105.7	1142.3	1204.7	1239.8
15°	1002.2	1037.2	1085.9	1163.6	1210.8
17.5°	924.5	967.1	1026.5	1119.4	1177.3
20°	849.9	892.5	961.1	1066.1	1137.7
22.5°	772.2	816.4	892.5	1009.8	1095.1
25°	691.5	740.2	822.5	953.4	1049.4
27.5°	612.3	664.1	750.9	894.0	1000.7
30°	533.1	584.9	679.3	833.1	950.4
32.5°	452.3	505.7	607.7	769.1	898.6
35°	373.1	428.0	537.6	708.2	848.3
37.5°	292.4	350.3	467.6	648.8	798.1
40°	216.3	274.2	400.6	589.4	746.3
42.5°	144.7	202.6	332.0	531.5	697.6
45°	79.2	132.5	269.6	478.2	648.8
47.5°	42.6	73.1	208.7	426.5	594.0
50°	32.0	39.6	153.8	371.6	536.1
52.5°	27.4	30.5	106.6	313.8	478.2
55°	22.8	24.4	71.6	263.5	418.8
57.5°	18.3	19.8	53.3	213.2	354.9
60°	13.7	16.8	47.2	164.5	290.9
62.5°	10.7	13.7	44.2	120.3	230.0
65°	7.6	10.7	39.6	82.2	169.1
67.5°	7.6	12.2	33.5	53.3	114.2
70°	6.1	16.8	28.9	35.0	64.0
72.5°	6.1	18.3	24.4	24.4	24.4
75°	6.1	19.8	21.3	21.3	21.3
77.5°	6.1	18.3	19.8	18.3	18.3
80°	6.1	16.8	16.8	16.8	16.8
82.5°	6.1	15.2	16.8	16.8	13.7
85°	6.1	13.7	16.8	16.8	12.2
87.5°	4.6	13.7	15.2	15.2	9.1
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	0.70	0.00	1.01	1.33	16.79	18.07	17.16	18.38	18.70
	3H	0.85	1.99	1.23	2.32	2.68	17.17	18.30	17.55	18.63	19.00
	4H	2.07	3.13	2.48	3.48	3.86	17.15	18.20	17.55	18.55	18.94
	6H	3.26	4.22	3.67	4.59	4.99	17.14	18.10	17.55	18.47	18.87
	8H	3.85	4.76	4.28	5.15	5.56	17.14	18.05	17.57	18.44	18.85
	12H	4.52	5.39	4.95	5.78	6.21	17.15	18.02	17.58	18.41	18.84
4H	2H	3.04	4.09	3.44	4.44	4.83	16.60	17.66	17.01	18.01	18.39
	3H	4.63	5.49	5.04	5.89	6.29	17.02	17.88	17.44	18.29	18.69
	4H	5.92	6.69	6.36	7.11	7.55	17.02	17.79	17.46	18.21	18.65
	6H	7.05	7.71	7.52	8.16	8.63	17.06	17.73	17.53	18.17	18.64
	8H	7.56	8.18	8.03	8.63	9.10	17.09	17.71	17.56	18.16	18.63
	12H	8.11	8.66	8.60	9.14	9.61	17.16	17.70	17.64	18.19	18.66
8H	4H	7.00	7.62	7.47	8.07	8.54	16.93	17.55	17.40	18.00	18.47
	6H	8.55	9.06	9.05	9.55	10.04	17.01	17.52	17.52	18.01	18.50
	8H	9.36	9.81	9.88	10.33	10.82	17.10	17.55	17.62	18.07	18.56
	12H	10.19	10.59	10.70	11.09	11.66	17.27	17.67	17.78	18.16	18.74
12H	4H	7.19	7.74	7.68	8.22	8.70	16.90	17.44	17.38	17.93	18.40
	6H	8.91	9.36	9.43	9.88	10.37	16.99	17.44	17.51	17.96	18.45
	8H	9.92	10.32	10.43	10.82	11.39	17.12	17.53	17.64	18.02	18.59