

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: P1056005

Luminaire Tested: S124R3DR-S1195D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056005  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1195D950-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

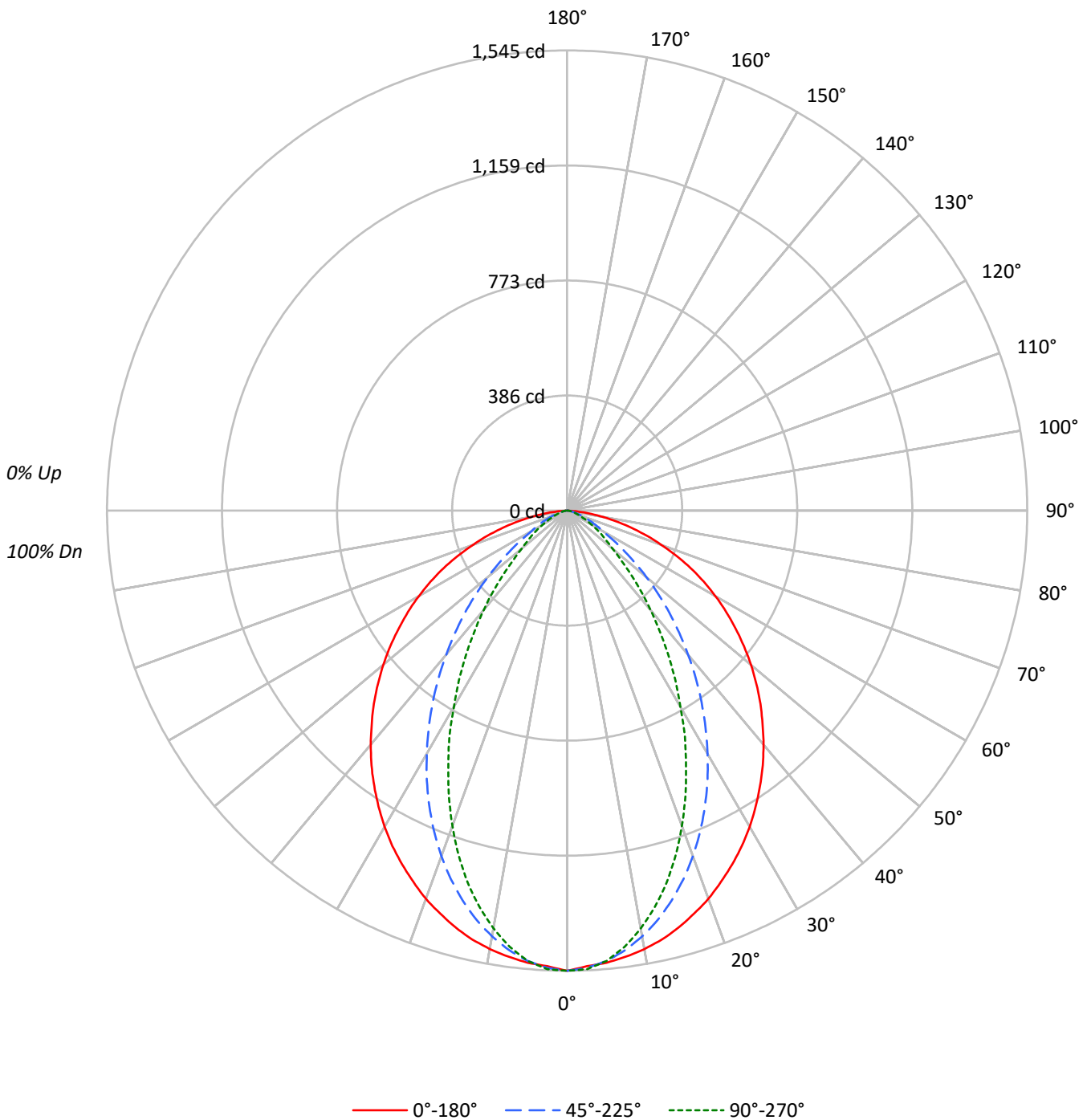
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2498.6 lumens  
Efficiency: N/A  
Efficacy: 59.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.9  
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	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

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

	0°	45°	90°
0°	13662	13662	13662
5°	13523	13472	13472
10°	13421	13033	12788
15°	13261	12405	11826
20°	13050	11615	10600
25°	12786	10681	9207
30°	12514	9621	7756
35°	12190	8494	6382
40°	11839	7290	5031
45°	11477	6063	3760
50°	11082	4769	2751
55°	10645	3527	2195
60°	10176	2442	1680
65°	9571	1895	1234
70°	8665	1339	967
75°	7570	933	738
80°	6079	733	657
85°	3358	588	588

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11477 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.3	5.7
10°-20°	383.0	15.3
20°-30°	510.8	20.4
30°-40°	514.3	20.6
40°-50°	421.8	16.9
50°-60°	288.3	11.5
60°-70°	161.1	6.4
70°-80°	63.9	2.6
80°-90°	12.1	0.5
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°	1037.1	41.5
0°-40°	1551.4	62.1
0°-60°	2261.5	90.5
0°-90°	2498.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2498.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1524	1541	1518	1511	1518	145
15°	1449	1433	1355	1308	1292	408
25°	1311	1246	1095	984	944	604
35°	1129	1010	787	637	591	706
45°	918	750	485	341	301	708
55°	691	485	229	152	142	618
65°	458	230	91	65	59	452
75°	222	60	27	23	22	237
85°	33	6	6	6	6	47
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1545.2	1545.2	1545.2	1545.2	1545.2
2.5°	1530.9	1549.6	1536.6	1538.1	1540.9
5°	1523.7	1540.9	1517.9	1510.7	1517.9
7.5°	1510.7	1523.7	1489.1	1474.7	1477.6
10°	1494.9	1499.2	1451.7	1427.3	1424.4
12.5°	1474.7	1469.0	1407.1	1371.2	1362.5
15°	1448.8	1433.0	1355.3	1307.8	1292.0
17.5°	1418.6	1391.3	1297.8	1235.9	1212.9
20°	1387.0	1346.7	1234.5	1155.3	1126.6
22.5°	1349.6	1299.2	1166.8	1070.5	1037.4
25°	1310.7	1246.0	1094.9	984.1	943.8
27.5°	1270.4	1191.3	1020.1	896.4	856.1
30°	1225.8	1132.3	942.4	808.6	759.7
32.5°	1178.4	1071.9	864.7	722.3	676.2
35°	1129.4	1010.0	787.0	637.4	591.3
37.5°	1079.1	946.7	709.3	556.8	510.8
40°	1025.8	882.0	631.6	480.6	435.9
42.5°	971.2	815.8	556.8	408.6	366.9
45°	917.9	749.6	484.9	341.0	300.7
47.5°	861.8	683.4	414.4	277.7	243.2
50°	805.7	617.2	346.7	223.0	200.0
52.5°	748.2	551.1	284.9	182.7	166.9
55°	690.6	484.9	228.8	152.5	142.4
57.5°	633.1	418.7	177.0	129.5	118.0
60°	575.5	353.9	138.1	105.0	95.0
62.5°	516.5	289.2	113.7	83.4	74.8
65°	457.5	230.2	90.6	64.7	59.0
67.5°	398.5	175.5	69.1	50.4	46.0
70°	335.2	125.2	51.8	38.8	37.4
72.5°	280.6	84.9	37.4	30.2	28.8
75°	221.6	60.4	27.3	23.0	21.6
77.5°	171.2	38.8	20.1	18.7	17.3
80°	119.4	21.6	14.4	12.9	12.9
82.5°	73.4	11.5	10.1	8.6	8.6
85°	33.1	5.8	5.8	5.8	5.8
87.5°	5.8	2.9	2.9	2.9	2.9
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	19.81	21.22	20.17	21.53	21.84	10.90	12.31	11.26	12.62	12.93
	3H	21.39	22.65	21.77	22.97	23.34	11.49	12.74	11.87	13.07	13.43
	4H	21.99	23.16	22.39	23.51	23.89	11.65	12.82	12.05	13.17	13.55
	6H	22.42	23.50	22.83	23.86	24.26	11.75	12.83	12.17	13.20	13.59
	8H	22.53	23.55	22.96	23.94	24.35	11.77	12.79	12.20	13.18	13.59
	12H	22.58	23.55	23.01	23.93	24.36	11.78	12.76	12.21	13.14	13.57
4H	2H	19.66	20.83	20.06	21.18	21.56	11.48	12.65	11.88	13.00	13.38
	3H	21.31	22.27	21.72	22.67	23.07	12.19	13.15	12.61	13.55	13.96
	4H	21.92	22.77	22.35	23.19	23.63	12.40	13.25	12.83	13.67	14.11
	6H	22.41	23.15	22.87	23.59	24.06	12.56	13.30	13.02	13.75	14.21
	8H	22.55	23.24	23.02	23.69	24.16	12.60	13.29	13.06	13.73	14.20
	12H	22.62	23.24	23.11	23.72	24.19	12.62	13.23	13.11	13.72	14.19
8H	4H	21.81	22.50	22.28	22.95	23.42	12.67	13.36	13.14	13.81	14.28
	6H	22.29	22.86	22.79	23.35	23.83	12.87	13.44	13.37	13.93	14.41
	8H	22.43	22.94	22.95	23.46	23.95	12.93	13.44	13.45	13.95	14.44
	12H	22.52	22.97	23.04	23.47	24.04	12.99	13.44	13.50	13.93	14.50
12H	4H	21.77	22.38	22.25	22.86	23.34	12.70	13.31	13.18	13.79	14.26
	6H	22.23	22.74	22.75	23.26	23.75	12.90	13.41	13.42	13.92	14.41
	8H	22.40	22.85	22.91	23.34	23.91	12.99	13.44	13.51	13.93	14.50