

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: P1056078

Luminaire Tested: S124R3DR-S795D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056078  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S795D930-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

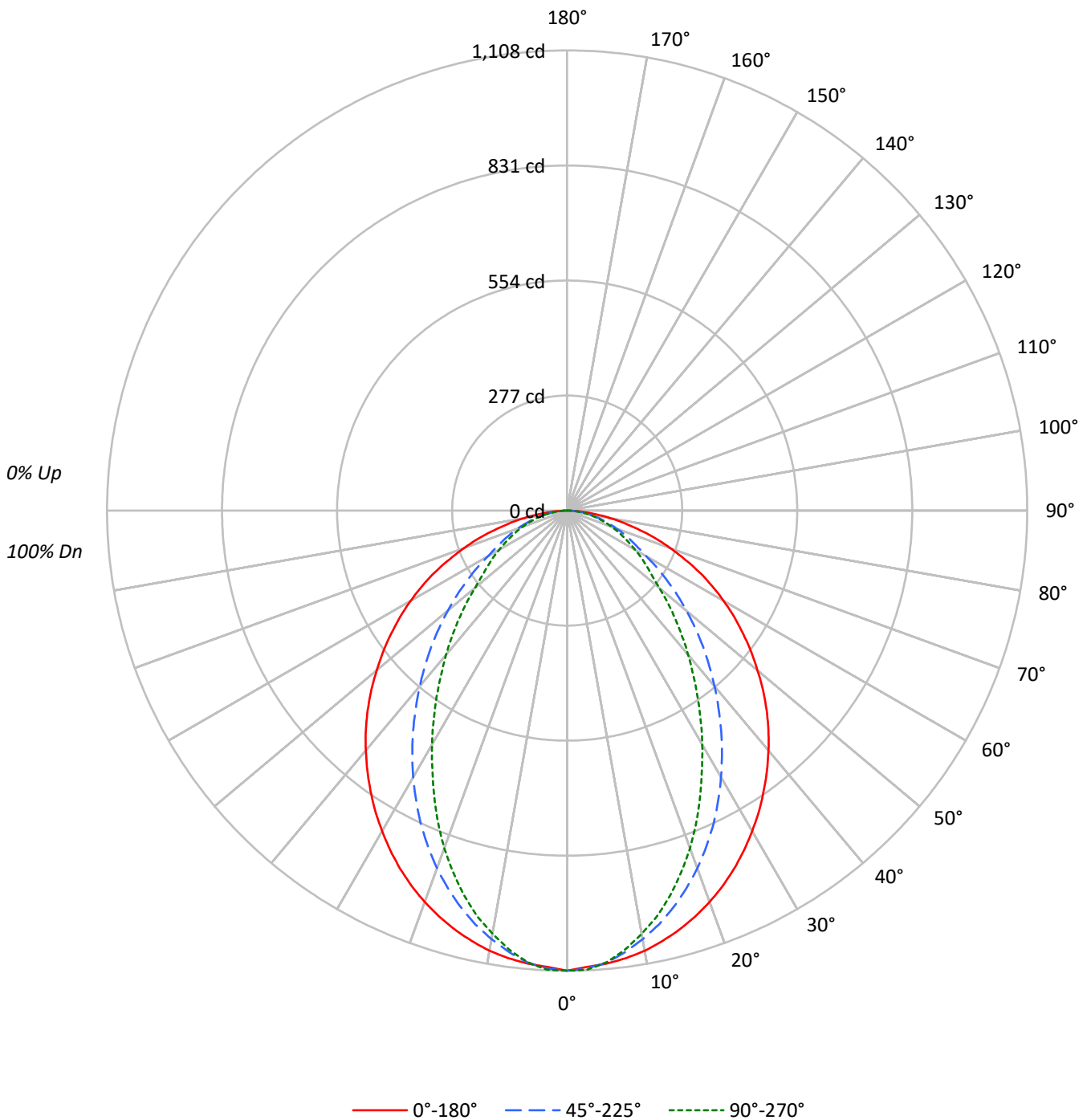
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2206.8 lumens  
Efficiency: N/A  
Efficacy: 83.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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

	0°	45°	90°
0°	9796	9796	9796
5°	9717	9696	9689
10°	9662	9406	9288
15°	9560	9053	8776
20°	9435	8622	8139
25°	9282	8128	7397
30°	9097	7566	6642
35°	8906	6978	5914
40°	8705	6371	5232
45°	8491	5780	4598
50°	8231	5158	3970
55°	7980	4536	3607
60°	7699	3892	3344
65°	7351	3531	3121
70°	6830	3267	2950
75°	6183	3010	2784
80°	5397	2780	2617
85°	4139	2567	2394

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8491 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.2	4.7
10°-20°	279.8	12.7
20°-30°	387.4	17.6
30°-40°	415.8	18.8
40°-50°	378.2	17.1
50°-60°	297.8	13.5
60°-70°	203.8	9.2
70°-80°	109.7	5.0
80°-90°	31.1	1.4
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°	770.4	34.9
0°-40°	1186.2	53.8
0°-60°	1862.2	84.4
0°-90°	2206.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2206.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1108	1108	1108	1108	1108	
5°	1095	1107	1092	1087	1092	104
15°	1044	1033	989	962	959	294
25°	952	912	833	773	758	438
35°	825	761	646	568	548	516
45°	679	593	462	382	368	524
55°	518	419	294	237	234	463
65°	351	251	169	150	149	347
75°	181	110	88	81	82	193
85°	41	28	25	24	24	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1108.0	1108.0	1108.0	1108.0	1108.0
2.5°	1099.8	1112.9	1103.1	1104.7	1106.4
5°	1094.9	1107.2	1092.5	1086.8	1091.7
7.5°	1086.8	1094.9	1072.1	1061.5	1066.4
10°	1076.2	1077.8	1047.7	1032.2	1034.6
12.5°	1061.5	1057.4	1020.8	998.7	1000.4
15°	1044.4	1033.0	989.0	962.1	958.8
17.5°	1024.8	1006.1	953.9	919.7	913.1
20°	1002.8	977.5	916.4	872.4	865.0
22.5°	978.4	945.7	875.6	823.5	812.9
25°	951.5	912.3	833.2	772.9	758.2
27.5°	922.1	876.4	787.6	721.5	702.8
30°	891.1	838.9	741.1	670.2	650.6
32.5°	859.3	800.6	693.8	618.8	598.4
35°	825.1	760.7	646.5	568.3	547.9
37.5°	790.0	719.1	598.4	519.3	498.1
40°	754.2	677.5	552.0	470.4	453.3
42.5°	717.5	635.1	506.3	424.8	409.3
45°	679.1	592.7	462.3	382.4	367.7
47.5°	640.0	549.5	417.4	342.4	328.6
50°	598.4	506.3	375.0	303.3	288.6
52.5°	558.5	462.3	334.3	265.0	257.6
55°	517.7	419.1	294.3	237.3	234.0
57.5°	477.0	375.9	257.6	215.2	212.0
60°	435.4	333.5	220.1	192.4	189.1
62.5°	393.8	291.9	192.4	170.4	168.8
65°	351.4	251.1	168.8	150.0	149.2
67.5°	306.6	212.0	147.6	132.1	131.3
70°	264.2	172.8	126.4	114.1	114.1
72.5°	224.2	137.0	106.8	97.0	97.0
75°	181.0	110.1	88.1	80.7	81.5
77.5°	142.7	86.4	70.9	66.0	66.0
80°	106.0	64.4	54.6	50.5	51.4
82.5°	71.7	44.8	39.1	36.7	36.7
85°	40.8	27.7	25.3	23.6	23.6
87.5°	14.7	13.0	12.2	10.6	11.4
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	19.07	20.60	19.44	20.91	21.22	14.85	16.37	15.21	16.69	17.00
	3H	20.85	22.22	21.22	22.54	22.91	16.46	17.83	16.84	18.16	18.52
	4H	21.52	22.80	21.92	23.15	23.53	17.09	18.38	17.49	18.72	19.10
	6H	22.03	23.22	22.44	23.58	23.97	17.59	18.78	18.00	19.14	19.54
	8H	22.19	23.32	22.62	23.71	24.11	17.76	18.89	18.19	19.28	19.68
	12H	22.29	23.37	22.72	23.76	24.18	17.88	18.97	18.31	19.35	19.78
4H	2H	19.17	20.45	19.57	20.80	21.18	15.57	16.85	15.97	17.20	17.58
	3H	21.11	22.18	21.52	22.58	22.98	17.37	18.44	17.78	18.84	19.24
	4H	21.87	22.83	22.30	23.25	23.68	18.11	19.07	18.54	19.49	19.93
	6H	22.50	23.34	22.96	23.78	24.24	18.73	19.57	19.18	20.01	20.47
	8H	22.72	23.51	23.18	23.95	24.42	18.94	19.73	19.41	20.17	20.64
	12H	22.88	23.58	23.36	24.05	24.53	19.11	19.81	19.59	20.29	20.76
8H	4H	21.92	22.71	22.39	23.15	23.62	18.50	19.28	18.96	19.73	20.19
	6H	22.62	23.27	23.12	23.76	24.24	19.23	19.88	19.73	20.37	20.85
	8H	22.89	23.47	23.40	23.98	24.47	19.52	20.10	20.03	20.61	21.10
	12H	23.11	23.62	23.62	24.11	24.68	19.76	20.28	20.27	20.77	21.33
12H	4H	21.92	22.62	22.40	23.09	23.57	18.55	19.26	19.04	19.73	20.20
	6H	22.62	23.20	23.13	23.71	24.20	19.31	19.90	19.83	20.41	20.89
	8H	22.92	23.44	23.43	23.93	24.50	19.66	20.18	20.17	20.67	21.23