

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: P1056080

Luminaire Tested: S124R3DR-S795D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056080  
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-S795D935-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

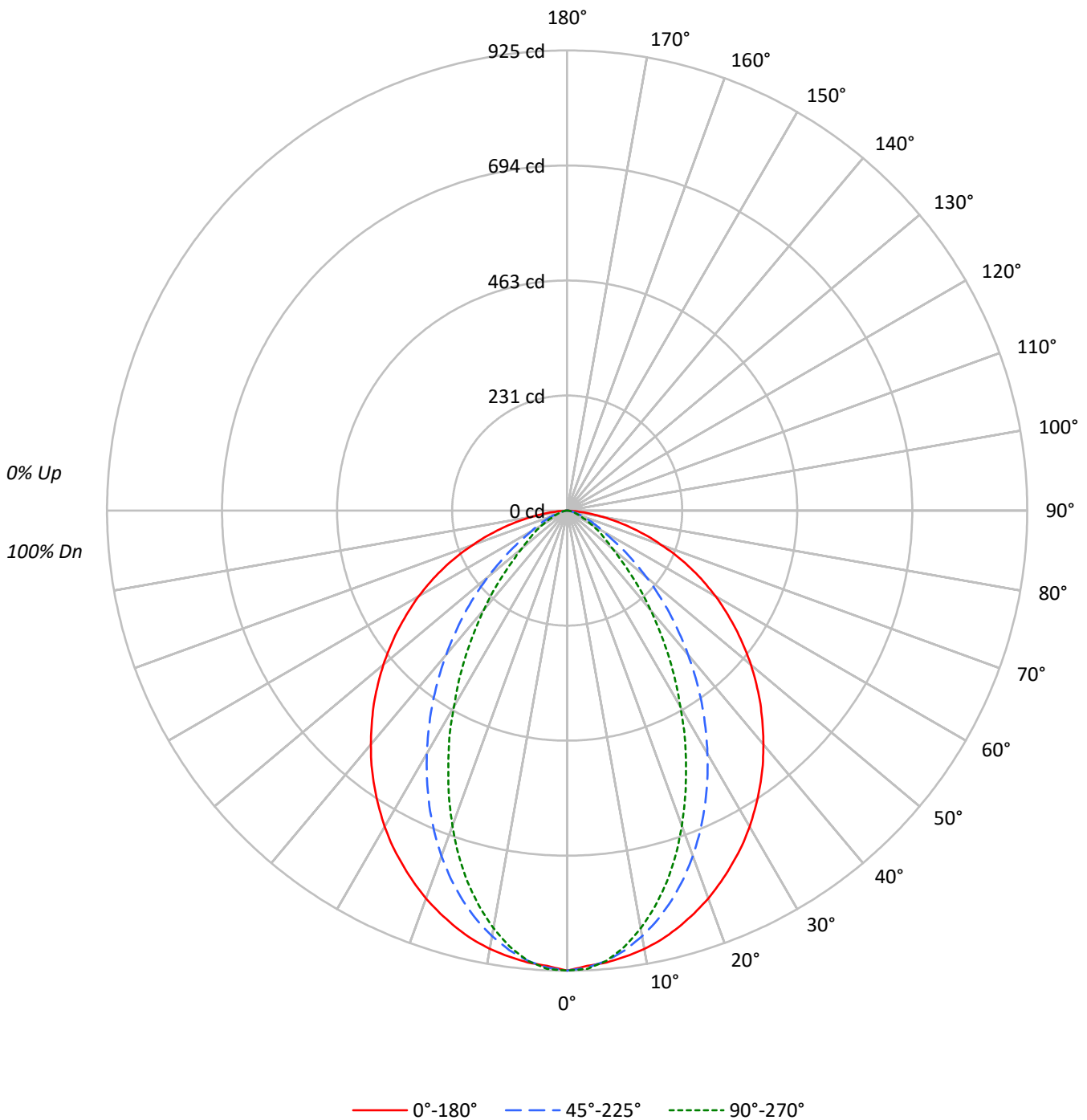
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1495.2 lumens  
Efficiency: N/A  
Efficacy: 56.6 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): 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	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°	8176	8176	8176
5°	8092	8062	8062
10°	8032	7799	7653
15°	7936	7424	7077
20°	7809	6950	6343
25°	7652	6392	5510
30°	7489	5758	4641
35°	7295	5084	3820
40°	7085	4363	3011
45°	6868	3629	2249
50°	6633	2854	1646
55°	6371	2110	1313
60°	6090	1462	1004
65°	5728	1134	738
70°	5186	801	579
75°	4530	560	441
80°	3640	438	392
85°	2009	345	345

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6868 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.8	5.7
10°-20°	229.2	15.3
20°-30°	305.7	20.4
30°-40°	307.8	20.6
40°-50°	252.4	16.9
50°-60°	172.5	11.5
60°-70°	96.4	6.4
70°-80°	38.2	2.6
80°-90°	7.2	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°	620.6	41.5
0°-40°	928.4	62.1
0°-60°	1353.4	90.5
0°-90°	1495.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1495.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	912	922	908	904	908	86
15°	867	858	811	783	773	244
25°	784	746	655	589	565	361
35°	676	604	471	381	354	423
45°	549	449	290	204	180	423
55°	413	290	137	91	85	370
65°	274	138	54	39	35	271
75°	133	36	16	14	13	142
85°	20	3	3	3	3	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	924.7	924.7	924.7	924.7	924.7
2.5°	916.1	927.3	919.5	920.4	922.1
5°	911.8	922.1	908.4	904.0	908.4
7.5°	904.0	911.8	891.1	882.5	884.2
10°	894.6	897.2	868.7	854.1	852.4
12.5°	882.5	879.1	842.1	820.5	815.4
15°	867.0	857.6	811.1	782.6	773.2
17.5°	848.9	832.6	776.6	739.6	725.8
20°	830.0	805.9	738.7	691.4	674.2
22.5°	807.6	777.5	698.3	640.6	620.8
25°	784.4	745.6	655.2	588.9	564.8
27.5°	760.3	712.9	610.4	536.4	512.3
30°	733.6	677.6	564.0	483.9	454.6
32.5°	705.2	641.4	517.5	432.2	404.7
35°	675.9	604.4	471.0	381.4	353.9
37.5°	645.7	566.5	424.5	333.2	305.7
40°	613.9	527.8	378.0	287.6	260.9
42.5°	581.2	488.2	333.2	244.5	219.6
45°	549.3	448.6	290.2	204.1	179.9
47.5°	515.7	409.0	248.0	166.2	145.5
50°	482.2	369.4	207.5	133.5	119.7
52.5°	447.7	329.8	170.5	109.3	99.9
55°	413.3	290.2	136.9	91.3	85.2
57.5°	378.8	250.6	105.9	77.5	70.6
60°	344.4	211.8	82.7	62.9	56.8
62.5°	309.1	173.1	68.0	49.9	44.8
65°	273.8	137.8	54.2	38.7	35.3
67.5°	238.5	105.0	41.3	30.1	27.6
70°	200.6	74.9	31.0	23.2	22.4
72.5°	167.9	50.8	22.4	18.1	17.2
75°	132.6	36.2	16.4	13.8	12.9
77.5°	102.5	23.2	12.1	11.2	10.3
80°	71.5	12.9	8.6	7.7	7.7
82.5°	43.9	6.9	6.0	5.2	5.2
85°	19.8	3.4	3.4	3.4	3.4
87.5°	3.4	1.7	1.7	1.7	1.7
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	18.02	19.43	18.39	19.74	20.06	9.12	10.52	9.48	10.83	11.15
	3H	19.61	20.86	19.99	21.19	21.55	9.71	10.96	10.09	11.29	11.65
	4H	20.21	21.37	20.61	21.72	22.11	9.86	11.03	10.27	11.38	11.76
	6H	20.64	21.71	21.05	22.08	22.47	9.97	11.04	10.38	11.41	11.81
	8H	20.75	21.77	21.18	22.16	22.56	9.99	11.01	10.42	11.40	11.80
	12H	20.79	21.77	21.22	22.15	22.58	10.00	10.97	10.43	11.36	11.79
4H	2H	17.88	19.05	18.28	19.40	19.78	9.70	10.87	10.10	11.22	11.60
	3H	19.53	20.48	19.94	20.89	21.29	10.41	11.37	10.82	11.77	12.17
	4H	20.13	20.99	20.57	21.41	21.85	10.61	11.47	11.05	11.89	12.33
	6H	20.62	21.37	21.09	21.81	22.27	10.78	11.52	11.24	11.97	12.43
	8H	20.77	21.46	21.23	21.90	22.37	10.81	11.50	11.28	11.95	12.42
	12H	20.84	21.45	21.32	21.93	22.41	10.84	11.45	11.32	11.93	12.40
8H	4H	20.03	20.72	20.49	21.16	21.63	10.89	11.58	11.35	12.02	12.49
	6H	20.51	21.07	21.01	21.57	22.05	11.09	11.65	11.59	12.15	12.63
	8H	20.65	21.16	21.17	21.67	22.16	11.15	11.65	11.66	12.17	12.66
	12H	20.74	21.19	21.25	21.68	22.25	11.20	11.65	11.72	12.15	12.72
12H	4H	19.99	20.60	20.47	21.08	21.55	10.91	11.53	11.40	12.01	12.48
	6H	20.45	20.96	20.97	21.47	21.96	11.12	11.63	11.64	12.14	12.63
	8H	20.62	21.06	21.13	21.56	22.13	11.21	11.66	11.72	12.15	12.72