

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: P1056209

Luminaire Tested: S124R3DR-H795D927-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056209  
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-H795D927-X4F0-XX-UDD-FLL-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

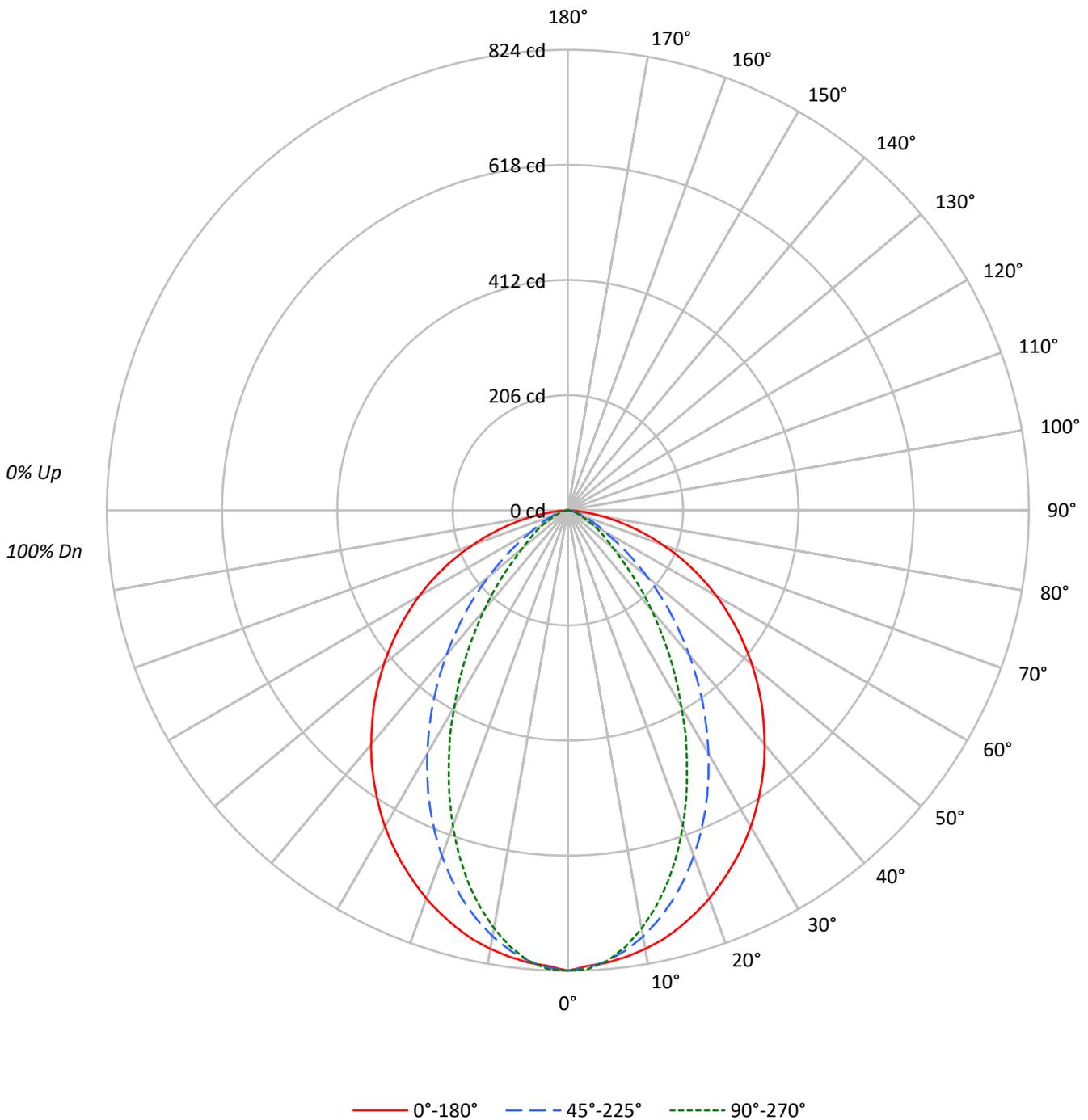
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1332.2 lumens  
Efficiency: N/A  
Efficacy: 56.0 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): 23.8  
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	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°	7284	7284	7284
5°	7210	7183	7183
10°	7155	6949	6819
15°	7071	6614	6306
20°	6958	6193	5652
25°	6818	5695	4909
30°	6673	5130	4135
35°	6500	4529	3403
40°	6313	3887	2682
45°	6119	3232	2004
50°	5909	2543	1466
55°	5676	1881	1170
60°	5425	1301	895
65°	5103	1010	659
70°	4619	713	514
75°	4034	499	393
80°	3243	392	351
85°	1785	314	314

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6119 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.4	5.7
10°-20°	204.2	15.3
20°-30°	272.3	20.4
30°-40°	274.2	20.6
40°-50°	224.9	16.9
50°-60°	153.7	11.5
60°-70°	85.9	6.4
70°-80°	34.0	2.6
80°-90°	6.5	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°	553.0	41.5
0°-40°	827.2	62.1
0°-60°	1205.8	90.5
0°-90°	1332.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1332.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	812	822	809	806	809	77
15°	772	764	723	697	689	218
25°	699	664	584	525	503	322
35°	602	538	420	340	315	377
45°	489	400	258	182	160	377
55°	368	258	122	81	76	329
65°	244	123	48	34	32	241
75°	118	32	15	12	12	127
85°	18	3	3	3	3	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	823.9	823.9	823.9	823.9	823.9
2.5°	816.2	826.2	819.3	820.1	821.6
5°	812.4	821.6	809.3	805.5	809.3
7.5°	805.5	812.4	794.0	786.3	787.8
10°	797.0	799.3	774.0	761.0	759.5
12.5°	786.3	783.2	750.2	731.1	726.5
15°	772.5	764.1	722.6	697.3	688.9
17.5°	756.4	741.8	691.9	659.0	646.7
20°	739.5	718.0	658.2	616.0	600.7
22.5°	719.6	692.7	622.1	570.7	553.1
25°	698.9	664.3	583.8	524.7	503.2
27.5°	677.4	635.2	543.9	477.9	456.4
30°	653.6	603.7	502.5	431.1	405.0
32.5°	628.3	571.5	461.0	385.1	360.5
35°	602.2	538.5	419.6	339.8	315.3
37.5°	575.3	504.8	378.2	296.9	272.3
40°	547.0	470.2	336.8	256.2	232.4
42.5°	517.8	435.0	296.9	217.9	195.6
45°	489.4	399.7	258.5	181.8	160.3
47.5°	459.5	364.4	220.9	148.1	129.6
50°	429.6	329.1	184.9	118.9	106.6
52.5°	398.9	293.8	151.9	97.4	89.0
55°	368.2	258.5	122.0	81.3	75.9
57.5°	337.5	223.2	94.4	69.0	62.9
60°	306.8	188.7	73.6	56.0	50.6
62.5°	275.4	154.2	60.6	44.5	39.9
65°	243.9	122.7	48.3	34.5	31.5
67.5°	212.5	93.6	36.8	26.8	24.5
70°	178.7	66.7	27.6	20.7	19.9
72.5°	149.6	45.3	19.9	16.1	15.3
75°	118.1	32.2	14.6	12.3	11.5
77.5°	91.3	20.7	10.7	10.0	9.2
80°	63.7	11.5	7.7	6.9	6.9
82.5°	39.1	6.1	5.4	4.6	4.6
85°	17.6	3.1	3.1	3.1	3.1
87.5°	3.1	1.5	1.5	1.5	1.5
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	17.62	19.03	17.99	19.34	19.66	8.71	10.12	9.07	10.43	10.74
	3H	19.21	20.46	19.59	20.79	21.15	9.30	10.55	9.68	10.88	11.24
	4H	19.80	20.97	20.20	21.32	21.70	9.46	10.63	9.86	10.98	11.36
	6H	20.24	21.31	20.65	21.68	22.07	9.56	10.64	9.98	11.01	11.40
	8H	20.35	21.37	20.78	21.76	22.16	9.58	10.61	10.01	11.00	11.40
	12H	20.39	21.37	20.82	21.75	22.18	9.59	10.57	10.02	10.95	11.38
4H	2H	17.48	18.65	17.88	18.99	19.38	9.29	10.46	9.69	10.81	11.19
	3H	19.12	20.08	19.54	20.49	20.89	10.00	10.96	10.42	11.37	11.77
	4H	19.73	20.59	20.16	21.01	21.45	10.21	11.07	10.64	11.48	11.93
	6H	20.22	20.96	20.68	21.41	21.87	10.38	11.12	10.84	11.56	12.03
	8H	20.36	21.06	20.83	21.50	21.97	10.41	11.10	10.88	11.55	12.02
	12H	20.44	21.05	20.92	21.53	22.01	10.43	11.05	10.92	11.53	12.00
8H	4H	19.62	20.31	20.09	20.76	21.23	10.48	11.17	10.95	11.62	12.09
	6H	20.10	20.67	20.60	21.17	21.65	10.68	11.25	11.18	11.75	12.23
	8H	20.25	20.76	20.77	21.27	21.76	10.74	11.25	11.26	11.76	12.25
	12H	20.34	20.79	20.85	21.28	21.85	10.80	11.25	11.32	11.74	12.31
12H	4H	19.58	20.20	20.07	20.68	21.15	10.51	11.12	10.99	11.60	12.08
	6H	20.05	20.56	20.57	21.07	21.56	10.71	11.22	11.23	11.74	12.23
	8H	20.21	20.66	20.73	21.16	21.73	10.81	11.26	11.32	11.75	12.32