

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: P1056132

Luminaire Tested: S124R3DR-H1195D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056132  
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-H1195D930-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

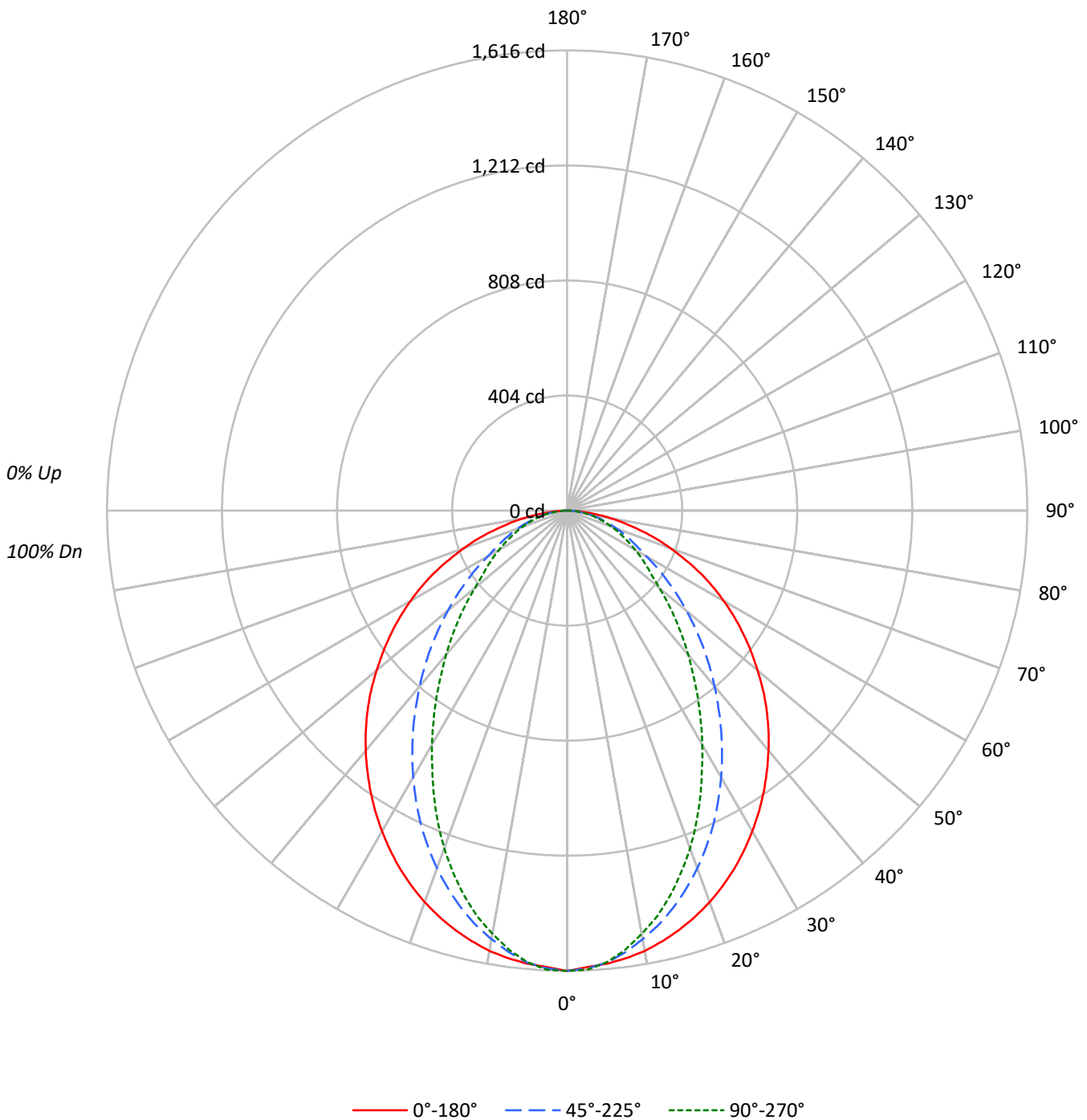
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3219.5 lumens  
Efficiency: N/A  
Efficacy: 88.0 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): 36.6  
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	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°	14291	14291	14291
5°	14177	14145	14135
10°	14095	13722	13551
15°	13947	13206	12804
20°	13765	12579	11874
25°	13541	11859	10791
30°	13272	11038	9691
35°	12992	10180	8627
40°	12698	9293	7632
45°	12389	8432	6707
50°	12008	7525	5792
55°	11643	6619	5263
60°	11232	5678	4879
65°	10724	5151	4554
70°	9963	4767	4304
75°	9022	4390	4062
80°	7872	4058	3814
85°	6036	3743	3500

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12389 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.5	4.7
10°-20°	408.2	12.7
20°-30°	565.2	17.6
30°-40°	606.7	18.8
40°-50°	551.7	17.1
50°-60°	434.5	13.5
60°-70°	297.4	9.2
70°-80°	160.1	5.0
80°-90°	45.3	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°	1123.9	34.9
0°-40°	1730.6	53.8
0°-60°	2716.8	84.4
0°-90°	3219.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3219.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1616	1616	1616	1616	1616	
5°	1597	1615	1594	1586	1593	152
15°	1524	1507	1443	1404	1399	430
25°	1388	1331	1216	1128	1106	639
35°	1204	1110	943	829	799	753
45°	991	865	674	558	536	764
55°	755	611	429	346	341	675
65°	513	366	246	219	218	506
75°	264	161	128	118	119	282
85°	60	40	37	34	34	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1616.4	1616.4	1616.4	1616.4	1616.4
2.5°	1604.5	1623.6	1609.3	1611.7	1614.1
5°	1597.4	1615.2	1593.8	1585.5	1592.6
7.5°	1585.5	1597.4	1564.1	1548.6	1555.8
10°	1570.0	1572.4	1528.4	1505.8	1509.4
12.5°	1548.6	1542.7	1489.2	1457.0	1459.4
15°	1523.7	1507.0	1442.8	1403.5	1398.8
17.5°	1495.1	1467.8	1391.6	1341.7	1332.2
20°	1463.0	1426.1	1336.9	1272.7	1262.0
22.5°	1427.3	1379.7	1277.4	1201.3	1185.9
25°	1388.1	1331.0	1215.6	1127.6	1106.2
27.5°	1345.2	1278.6	1149.0	1052.6	1025.3
30°	1300.0	1223.9	1081.2	977.7	949.2
32.5°	1253.7	1168.0	1012.2	902.8	873.0
35°	1203.7	1109.7	943.2	829.0	799.3
37.5°	1152.6	1049.1	873.0	757.7	726.7
40°	1100.2	988.4	805.2	686.3	661.3
42.5°	1046.7	926.6	738.6	619.7	597.1
45°	990.8	864.7	674.4	557.8	536.4
47.5°	933.7	801.7	609.0	499.6	479.3
50°	873.0	738.6	547.1	442.5	421.1
52.5°	814.8	674.4	487.7	386.6	375.9
55°	755.3	611.4	429.4	346.1	341.4
57.5°	695.8	548.3	375.9	314.0	309.3
60°	635.2	486.5	321.1	280.7	275.9
62.5°	574.5	425.8	280.7	248.6	246.2
65°	512.6	366.3	246.2	218.9	217.7
67.5°	447.2	309.3	215.3	192.7	191.5
70°	385.4	252.2	184.4	166.5	166.5
72.5°	327.1	199.8	155.8	141.5	141.5
75°	264.1	160.6	128.5	117.8	118.9
77.5°	208.1	126.1	103.5	96.3	96.3
80°	154.6	94.0	79.7	73.7	74.9
82.5°	104.7	65.4	57.1	53.5	53.5
85°	59.5	40.4	36.9	34.5	34.5
87.5°	21.4	19.0	17.8	15.5	16.7
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	20.38	21.91	20.75	22.22	22.53	16.16	17.68	16.52	18.00	18.31
	3H	22.16	23.53	22.54	23.86	24.22	17.77	19.14	18.15	19.47	19.83
	4H	22.83	24.12	23.23	24.46	24.84	18.40	19.69	18.80	20.04	20.42
	6H	23.34	24.53	23.75	24.89	25.29	18.90	20.09	19.31	20.46	20.85
	8H	23.50	24.63	23.93	25.02	25.42	19.07	20.20	19.50	20.59	20.99
	12H	23.60	24.68	24.03	25.07	25.50	19.19	20.28	19.62	20.66	21.09
4H	2H	20.48	21.76	20.88	22.11	22.49	16.88	18.16	17.28	18.51	18.89
	3H	22.42	23.49	22.83	23.89	24.29	18.69	19.76	19.10	20.16	20.56
	4H	23.18	24.14	23.61	24.56	25.00	19.42	20.39	19.85	20.80	21.24
	6H	23.81	24.65	24.27	25.09	25.55	20.04	20.88	20.50	21.32	21.78
	8H	24.03	24.82	24.50	25.26	25.73	20.25	21.04	20.72	21.48	21.95
	12H	24.19	24.89	24.67	25.37	25.84	20.42	21.12	20.90	21.60	22.07
8H	4H	23.24	24.02	23.70	24.46	24.93	19.81	20.60	20.27	21.04	21.51
	6H	23.93	24.58	24.43	25.07	25.55	20.54	21.19	21.04	21.68	22.16
	8H	24.20	24.78	24.72	25.29	25.78	20.83	21.41	21.34	21.92	22.41
	12H	24.42	24.94	24.93	25.43	25.99	21.08	21.59	21.59	22.08	22.65
12H	4H	23.23	23.93	23.71	24.41	24.88	19.87	20.57	20.35	21.05	21.52
	6H	23.93	24.51	24.44	25.02	25.51	20.62	21.21	21.14	21.72	22.21
	8H	24.24	24.75	24.75	25.24	25.81	20.97	21.49	21.48	21.98	22.55