

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: P1056118

Luminaire Tested: S124R3DR-H1195D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056118  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-H1195D835-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

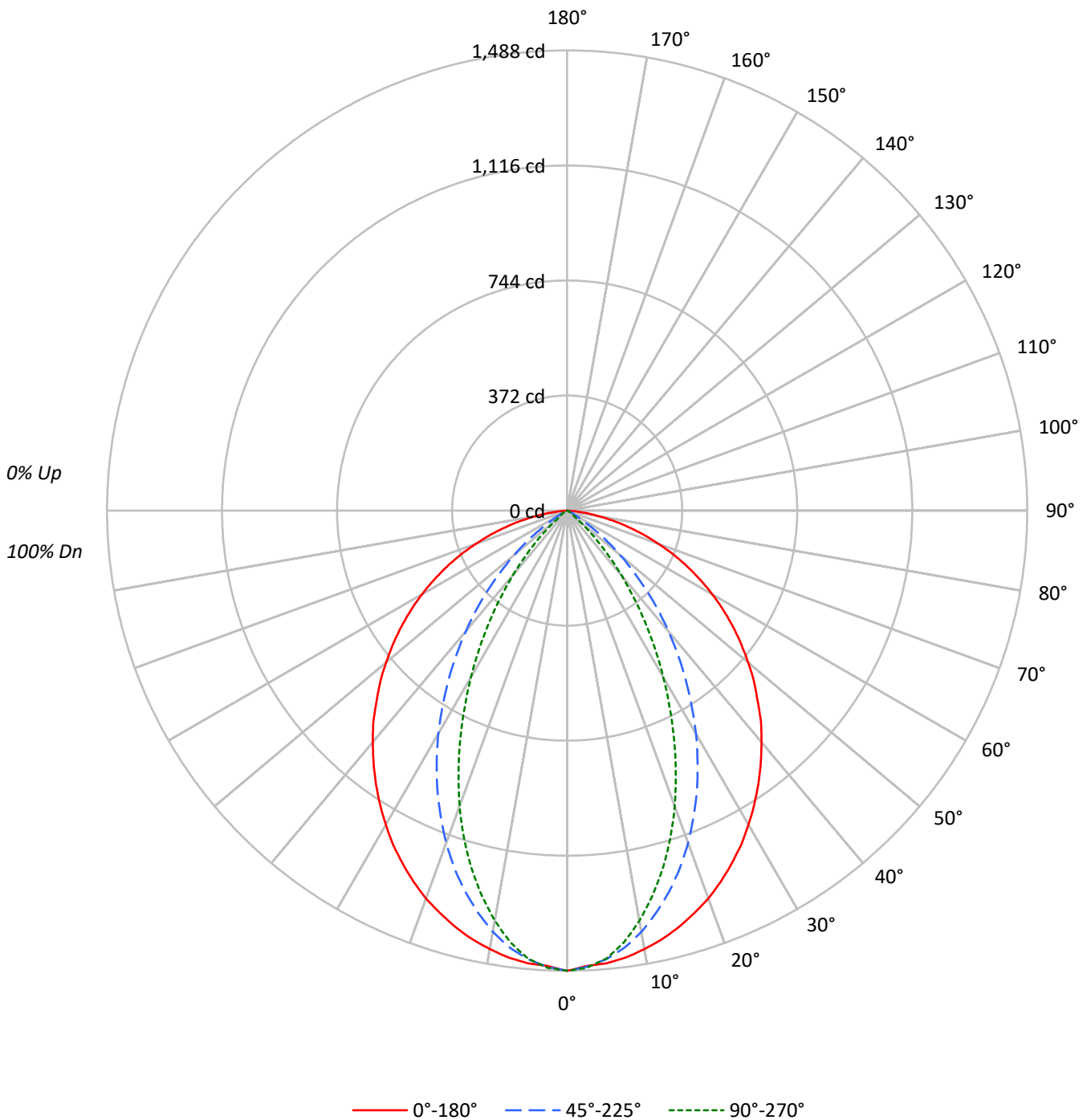
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2079.8 lumens  
Efficiency: N/A  
Efficacy: 56.8 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97  
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 (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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71					71			
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64					64			
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57					57			
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52					52			
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47					47			
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43					43			
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40					40			
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37					37			

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

	0°	45°	90°
0°	13157	13157	13157
5°	13038	12922	12909
10°	12927	12416	12089
15°	12766	11671	10950
20°	12560	10762	9567
25°	12282	9692	7984
30°	11974	8504	6345
35°	11636	7212	4724
40°	11282	5876	3149
45°	10891	4488	1733
50°	10515	3070	481
55°	10096	1665	314
60°	9596	516	180
65°	8973	335	92
70°	8109	150	39
75°	6976	51	0
80°	5275	0	0
85°	2222	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10891 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.3	6.6
10°-20°	360.4	17.3
20°-30°	465.7	22.4
30°-40°	445.1	21.4
40°-50°	332.9	16.0
50°-60°	198.1	9.5
60°-70°	100.6	4.8
70°-80°	35.0	1.7
80°-90°	4.8	0.2
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°	963.4	46.3
0°-40°	1408.5	67.7
0°-60°	1939.5	93.3
0°-90°	2079.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2079.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1488	1488	1488	1488	1488	
5°	1469	1481	1456	1449	1454	139
15°	1395	1366	1275	1215	1196	393
25°	1259	1172	994	862	818	580
35°	1078	929	668	498	438	674
45°	871	668	359	191	139	673
55°	655	407	108	25	20	585
65°	429	165	16	6	4	424
75°	204	22	2	2	0	217
85°	22	0	0	0	0	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1488.1	1488.1	1488.1	1488.1	1488.1
2.5°	1473.5	1491.0	1476.4	1477.8	1479.3
5°	1469.1	1480.8	1456.0	1448.7	1454.5
7.5°	1457.4	1461.8	1425.3	1406.4	1407.8
10°	1439.9	1435.5	1383.0	1350.9	1346.5
12.5°	1419.5	1404.9	1332.0	1285.3	1275.1
15°	1394.7	1365.5	1275.1	1215.2	1196.3
17.5°	1365.5	1323.2	1212.3	1133.6	1110.2
20°	1334.9	1276.5	1143.8	1046.0	1016.8
22.5°	1298.4	1224.0	1069.4	954.1	917.6
25°	1259.0	1171.5	993.5	862.2	818.4
27.5°	1218.2	1114.6	913.3	768.8	717.8
30°	1172.9	1054.8	833.0	674.0	621.5
32.5°	1126.3	993.5	749.9	586.5	528.1
35°	1078.1	929.3	668.2	497.5	437.7
37.5°	1028.5	865.1	589.4	412.9	351.6
40°	977.5	799.5	509.1	332.6	272.8
42.5°	927.8	733.8	433.3	256.8	201.3
45°	871.0	668.2	358.9	191.1	138.6
47.5°	819.9	604.0	287.4	129.8	81.7
50°	764.5	535.4	223.2	75.9	35.0
52.5°	709.0	471.2	163.4	33.6	26.3
55°	655.0	407.0	108.0	24.8	20.4
57.5°	598.1	342.8	58.4	19.0	14.6
60°	542.7	280.1	29.2	14.6	10.2
62.5°	485.8	220.3	23.3	8.8	5.8
65°	428.9	164.9	16.0	5.8	4.4
67.5°	372.0	112.3	10.2	2.9	1.5
70°	313.7	68.6	5.8	1.5	1.5
72.5°	258.2	35.0	2.9	1.5	1.5
75°	204.2	21.9	1.5	1.5	0.0
77.5°	151.7	11.7	1.5	1.5	0.0
80°	103.6	4.4	0.0	0.0	0.0
82.5°	59.8	1.5	0.0	0.0	0.0
85°	21.9	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	19.41	20.74	19.77	21.05	21.36	0.00	0.00	0.00	0.00	0.04
	3H	20.95	22.13	21.33	22.46	22.82	0.00	0.00	0.00	0.00	0.00
	4H	21.54	22.64	21.95	22.99	23.37	0.00	0.00	0.00	0.00	0.00
	6H	21.96	22.97	22.38	23.34	23.73	0.00	0.00	0.00	0.00	0.00
	8H	22.06	23.01	22.49	23.40	23.81	0.00	0.00	0.00	0.00	0.00
	12H	22.08	22.99	22.51	23.37	23.80	0.00	0.00	0.00	0.00	0.00
4H	2H	19.19	20.28	19.59	20.63	21.01	0.00	0.16	0.00	0.51	0.89
	3H	20.75	21.64	21.16	22.05	22.45	0.00	0.00	0.00	0.33	0.73
	4H	21.33	22.13	21.77	22.55	22.99	0.00	0.00	0.00	0.19	0.64
	6H	21.79	22.48	22.26	22.93	23.39	0.00	0.00	0.00	0.04	0.51
	8H	21.91	22.55	22.38	23.00	23.47	0.00	0.00	0.00	0.00	0.41
	12H	21.95	22.52	22.44	23.00	23.48	0.00	0.00	0.00	0.00	0.33
8H	4H	21.20	21.84	21.67	22.28	22.76	0.71	1.35	1.18	1.80	2.27
	6H	21.64	22.16	22.14	22.66	23.14	0.62	1.14	1.12	1.64	2.12
	8H	21.75	22.22	22.28	22.74	23.23	0.56	1.03	1.08	1.54	2.03
	12H	21.80	22.22	22.32	22.71	23.28	0.51	0.93	1.03	1.42	1.99
12H	4H	21.15	21.72	21.64	22.20	22.67	1.12	1.69	1.61	2.17	2.64
	6H	21.57	22.04	22.10	22.56	23.05	1.01	1.48	1.54	2.00	2.49
	8H	21.71	22.12	22.23	22.62	23.19	0.97	1.38	1.49	1.88	2.45