

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: P1056067

Luminaire Tested: S124R3DR-S795D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056067  
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-S795D840-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

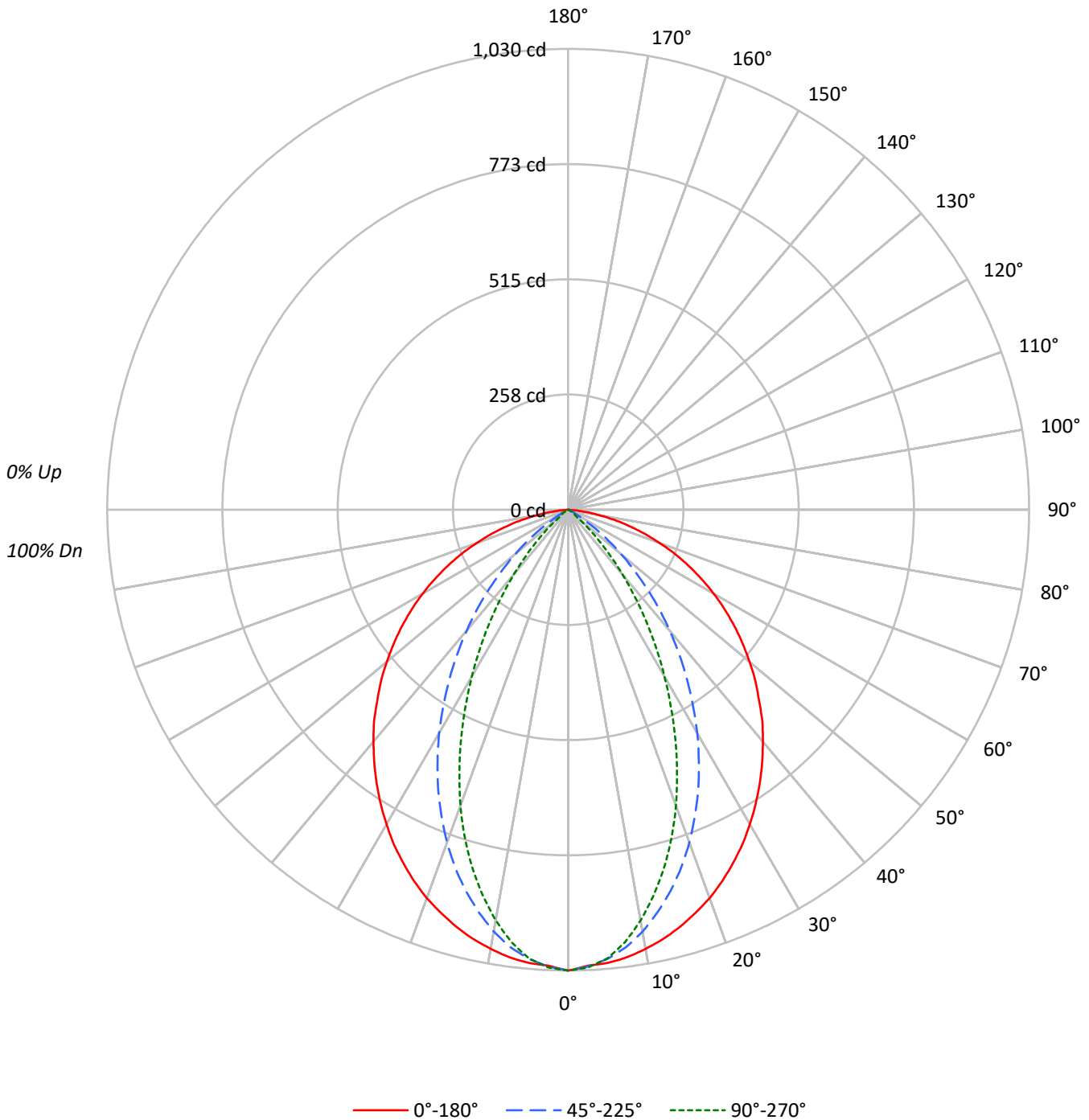
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1439.7 lumens  
Efficiency: N/A  
Efficacy: 54.5 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): 26.4  
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

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

	0°	45°	90°
0°	9108	9108	9108
5°	9025	8944	8936
10°	8948	8595	8368
15°	8837	8079	7580
20°	8694	7449	6623
25°	8502	6709	5526
30°	8289	5887	4392
35°	8055	4992	3270
40°	7809	4067	2179
45°	7538	3106	1199
50°	7279	2125	333
55°	6989	1151	217
60°	6643	357	126
65°	6211	232	63
70°	5612	103	26
75°	4830	34	0
80°	3651	0	0
85°	1532	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7538 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.0	6.6
10°-20°	249.5	17.3
20°-30°	322.4	22.4
30°-40°	308.1	21.4
40°-50°	230.4	16.0
50°-60°	137.1	9.5
60°-70°	69.6	4.8
70°-80°	24.2	1.7
80°-90°	3.3	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°	666.9	46.3
0°-40°	975.0	67.7
0°-60°	1342.5	93.3
0°-90°	1439.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1439.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1017	1025	1008	1003	1007	96
15°	965	945	883	841	828	272
25°	872	811	688	597	566	401
35°	746	643	462	344	303	467
45°	603	462	248	132	96	466
55°	453	282	75	17	14	405
65°	297	114	11	4	3	294
75°	141	15	1	1	0	150
85°	15	0	0	0	0	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1030.1	1030.1	1030.1	1030.1	1030.1
2.5°	1020.0	1032.1	1022.0	1023.0	1024.0
5°	1016.9	1025.0	1007.8	1002.8	1006.8
7.5°	1008.9	1011.9	986.6	973.5	974.5
10°	996.7	993.7	957.4	935.1	932.1
12.5°	982.6	972.5	922.0	889.7	882.6
15°	965.4	945.2	882.6	841.2	828.1
17.5°	945.2	915.9	839.2	784.7	768.5
20°	924.0	883.6	791.7	724.1	703.9
22.5°	898.8	847.3	740.2	660.5	635.2
25°	871.5	810.9	687.7	596.8	566.5
27.5°	843.2	771.5	632.2	532.2	496.9
30°	811.9	730.1	576.6	466.6	430.2
32.5°	779.6	687.7	519.1	406.0	365.6
35°	746.3	643.3	462.5	344.4	303.0
37.5°	712.0	598.9	408.0	285.8	243.4
40°	676.6	553.4	352.4	230.2	188.8
42.5°	642.3	508.0	299.9	177.7	139.4
45°	602.9	462.5	248.4	132.3	95.9
47.5°	567.5	418.1	198.9	89.9	56.6
50°	529.2	370.6	154.5	52.5	24.2
52.5°	490.8	326.2	113.1	23.2	18.2
55°	453.4	281.8	74.7	17.2	14.1
57.5°	414.0	237.3	40.4	13.1	10.1
60°	375.7	193.9	20.2	10.1	7.1
62.5°	336.3	152.5	16.2	6.1	4.0
65°	296.9	114.1	11.1	4.0	3.0
67.5°	257.5	77.8	7.1	2.0	1.0
70°	217.1	47.5	4.0	1.0	1.0
72.5°	178.7	24.2	2.0	1.0	1.0
75°	141.4	15.1	1.0	1.0	0.0
77.5°	105.0	8.1	1.0	1.0	0.0
80°	71.7	3.0	0.0	0.0	0.0
82.5°	41.4	1.0	0.0	0.0	0.0
85°	15.1	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	18.13	19.46	18.49	19.77	20.09	0.00	0.00	0.00	0.00	0.00
	3H	19.67	20.85	20.05	21.18	21.54	0.00	0.00	0.00	0.00	0.00
	4H	20.27	21.36	20.67	21.71	22.10	0.00	0.00	0.00	0.00	0.00
	6H	20.68	21.69	21.10	22.06	22.45	0.00	0.00	0.00	0.00	0.00
	8H	20.78	21.73	21.21	22.13	22.53	0.00	0.00	0.00	0.00	0.00
	12H	20.80	21.71	21.23	22.09	22.52	0.00	0.00	0.00	0.00	0.00
4H	2H	17.91	19.00	18.31	19.35	19.74	0.00	0.00	0.00	0.00	0.00
	3H	19.47	20.36	19.88	20.77	21.17	0.00	0.00	0.00	0.00	0.00
	4H	20.05	20.85	20.49	21.27	21.71	0.00	0.00	0.00	0.00	0.00
	6H	20.51	21.20	20.98	21.65	22.11	0.00	0.00	0.00	0.00	0.00
	8H	20.63	21.28	21.10	21.72	22.19	0.00	0.00	0.00	0.00	0.00
	12H	20.67	21.24	21.16	21.72	22.20	0.00	0.00	0.00	0.00	0.00
8H	4H	19.92	20.56	20.39	21.01	21.48	0.00	0.06	0.00	0.50	0.98
	6H	20.36	20.88	20.86	21.38	21.86	0.00	0.00	0.00	0.34	0.83
	8H	20.48	20.94	21.00	21.46	21.95	0.00	0.00	0.00	0.25	0.74
	12H	20.52	20.94	21.04	21.43	22.00	0.00	0.00	0.00	0.13	0.70
12H	4H	19.87	20.44	20.36	20.92	21.40	0.00	0.40	0.32	0.88	1.35
	6H	20.30	20.77	20.82	21.28	21.77	0.00	0.19	0.24	0.71	1.20
	8H	20.43	20.84	20.95	21.34	21.91	0.00	0.09	0.19	0.59	1.16