

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: P1056208

Luminaire Tested: S124R3DR-H795D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056208  
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-H795D927-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

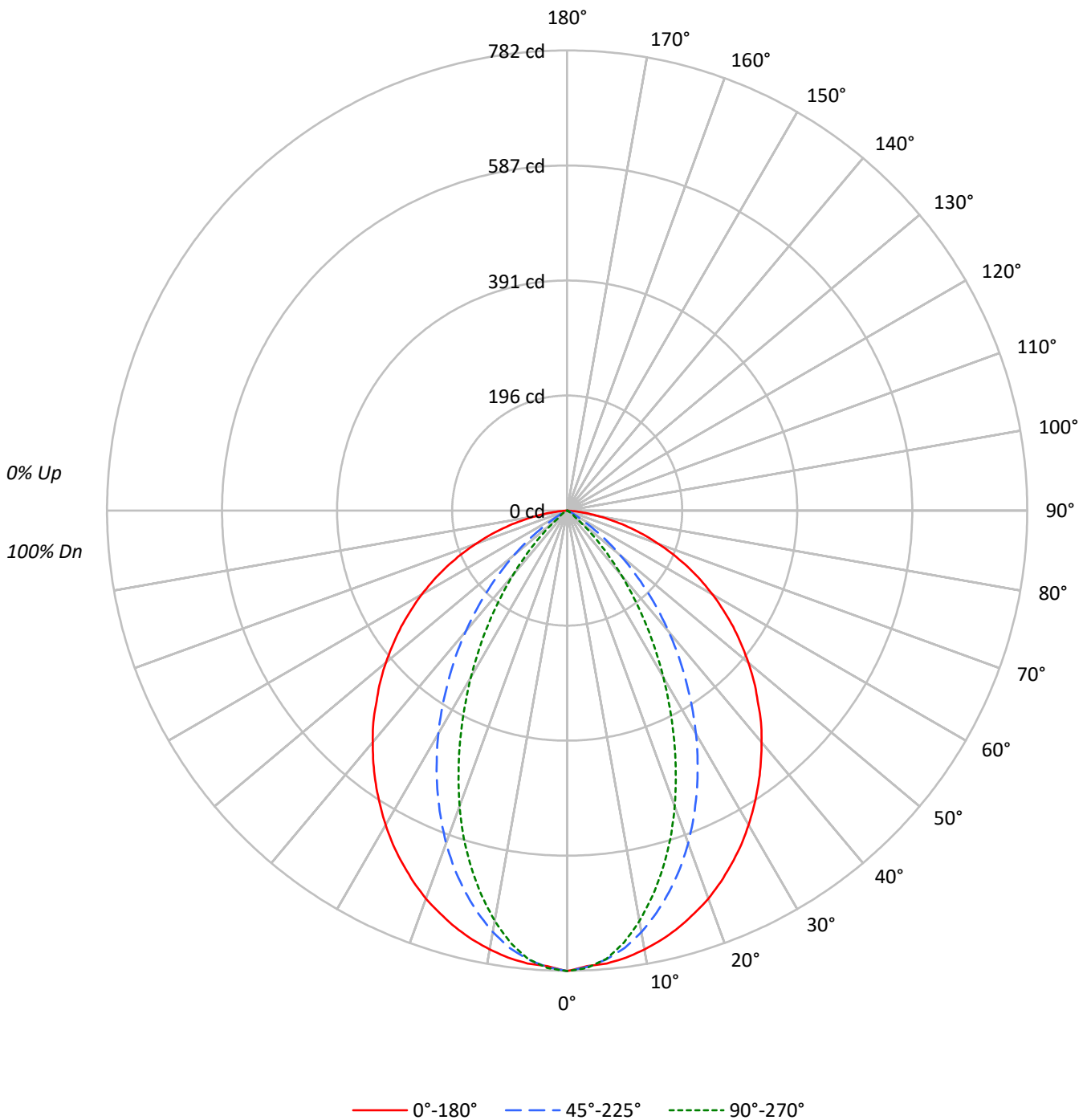
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1093.6 lumens  
Efficiency: N/A  
Efficacy: 46.0 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): 23.8  
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	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°	6918	6918	6918
5°	6856	6795	6788
10°	6798	6529	6357
15°	6713	6137	5757
20°	6604	5658	5031
25°	6458	5096	4199
30°	6297	4472	3336
35°	6119	3792	2484
40°	5932	3090	1656
45°	5727	2359	912
50°	5529	1615	253
55°	5309	876	165
60°	5047	271	95
65°	4718	176	48
70°	4263	80	21
75°	3669	27	0
80°	2775	0	0
85°	1167	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5727 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	6.6
10°-20°	189.5	17.3
20°-30°	244.9	22.4
30°-40°	234.1	21.4
40°-50°	175.0	16.0
50°-60°	104.2	9.5
60°-70°	52.9	4.8
70°-80°	18.4	1.7
80°-90°	2.5	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°	506.6	46.3
0°-40°	740.6	67.7
0°-60°	1019.8	93.3
0°-90°	1093.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1093.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	782	782	782	782	782	
5°	772	779	766	762	765	73
15°	733	718	670	639	629	207
25°	662	616	522	453	430	305
35°	567	489	351	262	230	355
45°	458	351	189	100	73	354
55°	344	214	57	13	11	307
65°	226	87	8	3	2	223
75°	107	12	1	1	0	114
85°	12	0	0	0	0	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	782.5	782.5	782.5	782.5	782.5
2.5°	774.8	784.0	776.3	777.1	777.9
5°	772.5	778.6	765.6	761.8	764.8
7.5°	766.4	768.7	749.5	739.5	740.3
10°	757.2	754.9	727.2	710.4	708.1
12.5°	746.4	738.7	700.4	675.8	670.5
15°	733.4	718.0	670.5	639.0	629.0
17.5°	718.0	695.8	637.5	596.1	583.8
20°	701.9	671.2	601.4	550.0	534.7
22.5°	682.7	643.6	562.3	501.7	482.5
25°	662.0	616.0	522.4	453.4	430.4
27.5°	640.5	586.1	480.2	404.3	377.4
30°	616.8	554.6	438.0	354.4	326.8
32.5°	592.2	522.4	394.3	308.4	277.7
35°	566.9	488.7	351.3	261.6	230.1
37.5°	540.8	454.9	309.9	217.1	184.9
40°	514.0	420.4	267.7	174.9	143.5
42.5°	487.9	385.9	227.8	135.0	105.9
45°	458.0	351.3	188.7	100.5	72.9
47.5°	431.1	317.6	151.1	68.3	43.0
50°	402.0	281.5	117.4	39.9	18.4
52.5°	372.8	247.8	85.9	17.6	13.8
55°	344.4	214.0	56.8	13.0	10.7
57.5°	314.5	180.3	30.7	10.0	7.7
60°	285.4	147.3	15.3	7.7	5.4
62.5°	255.5	115.8	12.3	4.6	3.1
65°	225.5	86.7	8.4	3.1	2.3
67.5°	195.6	59.1	5.4	1.5	0.8
70°	164.9	36.1	3.1	0.8	0.8
72.5°	135.8	18.4	1.5	0.8	0.8
75°	107.4	11.5	0.8	0.8	0.0
77.5°	79.8	6.1	0.8	0.8	0.0
80°	54.5	2.3	0.0	0.0	0.0
82.5°	31.5	0.8	0.0	0.0	0.0
85°	11.5	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	17.18	18.50	17.54	18.82	19.13	0.00	0.00	0.00	0.00	0.00
	3H	18.72	19.89	19.10	20.22	20.59	0.00	0.00	0.00	0.00	0.00
	4H	19.31	20.41	19.71	20.76	21.14	0.00	0.00	0.00	0.00	0.00
	6H	19.73	20.73	20.14	21.11	21.50	0.00	0.00	0.00	0.00	0.00
	8H	19.83	20.78	20.26	21.17	21.58	0.00	0.00	0.00	0.00	0.00
	12H	19.85	20.76	20.28	21.14	21.57	0.00	0.00	0.00	0.00	0.00
4H	2H	16.95	18.05	17.36	18.40	18.78	0.00	0.00	0.00	0.00	0.00
	3H	18.52	19.41	18.93	19.81	20.22	0.00	0.00	0.00	0.00	0.00
	4H	19.10	19.90	19.53	20.32	20.76	0.00	0.00	0.00	0.00	0.00
	6H	19.56	20.25	20.02	20.69	21.16	0.00	0.00	0.00	0.00	0.00
	8H	19.68	20.32	20.15	20.77	21.24	0.00	0.00	0.00	0.00	0.00
	12H	19.72	20.29	20.21	20.77	21.24	0.00	0.00	0.00	0.00	0.00
8H	4H	18.96	19.60	19.43	20.05	20.52	0.00	0.00	0.00	0.00	0.04
	6H	19.40	19.93	19.91	20.42	20.90	0.00	0.00	0.00	0.00	0.00
	8H	19.52	19.99	20.04	20.51	21.00	0.00	0.00	0.00	0.00	0.00
	12H	19.57	19.98	20.09	20.48	21.05	0.00	0.00	0.00	0.00	0.00
12H	4H	18.92	19.48	19.40	19.97	20.44	0.00	0.00	0.00	0.00	0.41
	6H	19.34	19.81	19.86	20.33	20.82	0.00	0.00	0.00	0.00	0.26
	8H	19.48	19.89	19.99	20.39	20.96	0.00	0.00	0.00	0.00	0.22