

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: P1056184

Luminaire Tested: S124R3DR-H575D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056184  
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-H575D930-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

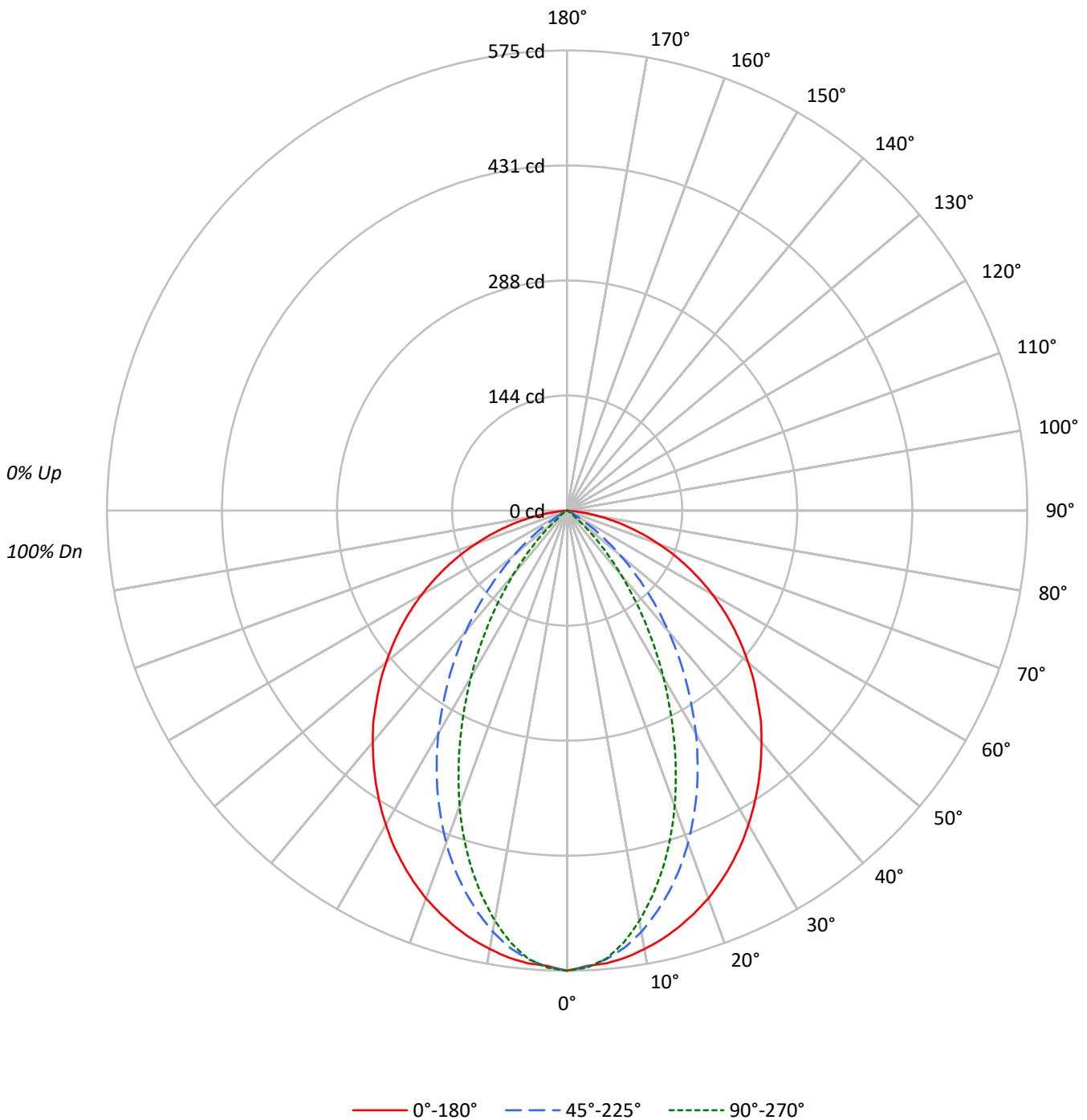
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 803.7 lumens  
Efficiency: N/A  
Efficacy: 46.5 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): 17.3  
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°	5084	5084	5084
5°	5038	4993	4988
10°	4995	4798	4671
15°	4933	4510	4232
20°	4853	4159	3697
25°	4746	3745	3086
30°	4627	3286	2452
35°	4497	2787	1825
40°	4359	2270	1216
45°	4209	1734	670
50°	4063	1187	186
55°	3901	643	122
60°	3708	200	69
65°	3467	130	36
70°	3133	59	16
75°	2695	20	0
80°	2037	0	0
85°	862	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4209 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.0	6.6
10°-20°	139.3	17.3
20°-30°	180.0	22.4
30°-40°	172.0	21.4
40°-50°	128.6	16.0
50°-60°	76.5	9.5
60°-70°	38.9	4.8
70°-80°	13.5	1.7
80°-90°	1.9	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°	372.3	46.3
0°-40°	544.3	67.7
0°-60°	749.4	93.3
0°-90°	803.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	803.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	575	575	575	575	575	
5°	568	572	563	560	562	54
15°	539	528	493	470	462	152
25°	486	453	384	333	316	224
35°	417	359	258	192	169	261
45°	337	258	139	74	54	260
55°	253	157	42	10	8	226
65°	166	64	6	2	2	164
75°	79	8	1	1	0	84
85°	8	0	0	0	0	14
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	575.0	575.0	575.0	575.0	575.0
2.5°	569.4	576.1	570.5	571.1	571.6
5°	567.7	572.2	562.6	559.8	562.0
7.5°	563.2	564.9	550.8	543.4	544.0
10°	556.4	554.7	534.4	522.0	520.3
12.5°	548.5	542.9	514.7	496.7	492.7
15°	538.9	527.7	492.7	469.6	462.3
17.5°	527.7	511.3	468.5	438.0	429.0
20°	515.8	493.3	442.0	404.2	392.9
22.5°	501.7	473.0	413.2	368.7	354.6
25°	486.5	452.7	383.9	333.2	316.3
27.5°	470.7	430.7	352.9	297.1	277.4
30°	453.2	407.6	321.9	260.4	240.2
32.5°	435.2	383.9	289.8	226.6	204.1
35°	416.6	359.1	258.2	192.2	169.1
37.5°	397.4	334.3	227.8	159.5	135.9
40°	377.7	308.9	196.7	128.5	105.4
42.5°	358.5	283.6	167.4	99.2	77.8
45°	336.6	258.2	138.7	73.8	53.6
47.5°	316.8	233.4	111.1	50.2	31.6
50°	295.4	206.9	86.3	29.3	13.5
52.5°	274.0	182.1	63.1	13.0	10.1
55°	253.1	157.3	41.7	9.6	7.9
57.5°	231.1	132.5	22.5	7.3	5.6
60°	209.7	108.2	11.3	5.6	3.9
62.5°	187.7	85.1	9.0	3.4	2.3
65°	165.7	63.7	6.2	2.3	1.7
67.5°	143.8	43.4	3.9	1.1	0.6
70°	121.2	26.5	2.3	0.6	0.6
72.5°	99.8	13.5	1.1	0.6	0.6
75°	78.9	8.5	0.6	0.6	0.0
77.5°	58.6	4.5	0.6	0.6	0.0
80°	40.0	1.7	0.0	0.0	0.0
82.5°	23.1	0.6	0.0	0.0	0.0
85°	8.5	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	16.10	17.43	16.47	17.75	18.06	0.00	0.00	0.00	0.00	0.00
	3H	17.65	18.82	18.03	19.15	19.52	0.00	0.00	0.00	0.00	0.00
	4H	18.24	19.34	18.64	19.69	20.07	0.00	0.00	0.00	0.00	0.00
	6H	18.66	19.66	19.07	20.03	20.43	0.00	0.00	0.00	0.00	0.00
	8H	18.76	19.71	19.19	20.10	20.50	0.00	0.00	0.00	0.00	0.00
	12H	18.78	19.69	19.21	20.07	20.50	0.00	0.00	0.00	0.00	0.00
4H	2H	15.88	16.98	16.29	17.33	17.71	0.00	0.00	0.00	0.00	0.00
	3H	17.45	18.34	17.86	18.74	19.15	0.00	0.00	0.00	0.00	0.00
	4H	18.03	18.83	18.46	19.25	19.69	0.00	0.00	0.00	0.00	0.00
	6H	18.49	19.18	18.95	19.62	20.09	0.00	0.00	0.00	0.00	0.00
	8H	18.61	19.25	19.08	19.70	20.17	0.00	0.00	0.00	0.00	0.00
	12H	18.65	19.21	19.14	19.70	20.17	0.00	0.00	0.00	0.00	0.00
8H	4H	17.89	18.53	18.36	18.98	19.45	0.00	0.00	0.00	0.00	0.00
	6H	18.33	18.86	18.84	19.35	19.83	0.00	0.00	0.00	0.00	0.00
	8H	18.45	18.92	18.97	19.43	19.93	0.00	0.00	0.00	0.00	0.00
	12H	18.50	18.91	19.01	19.41	19.98	0.00	0.00	0.00	0.00	0.00
12H	4H	17.85	18.41	18.33	18.90	19.37	0.00	0.00	0.00	0.00	0.00
	6H	18.27	18.74	18.79	19.26	19.75	0.00	0.00	0.00	0.00	0.00
	8H	18.41	18.82	18.92	19.31	19.89	0.00	0.00	0.00	0.00	0.00