

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056193

Luminaire Tested: S124R3DR-H575D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056193  
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-H575D950-X4F0-XX-UDD-FLL-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

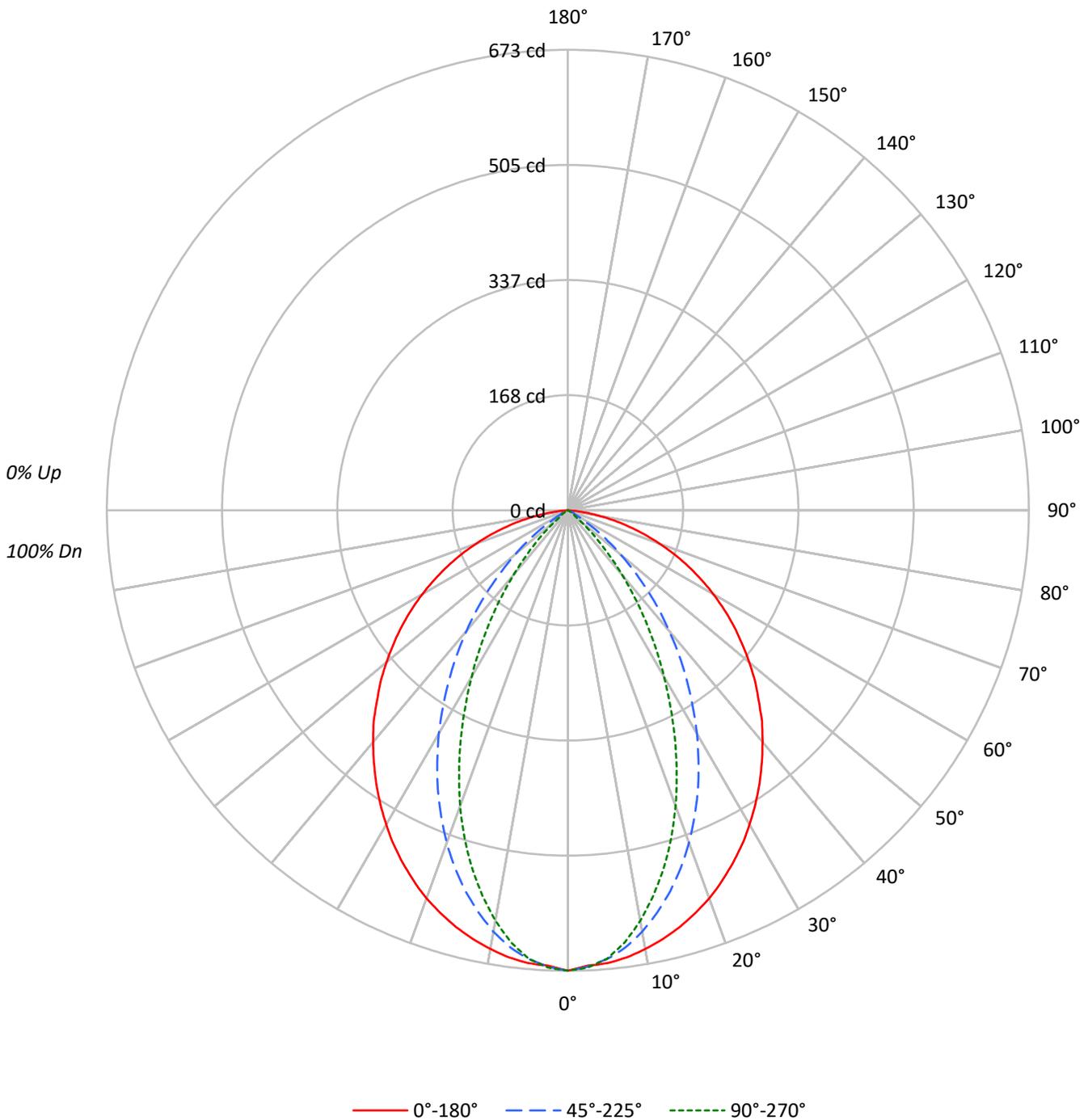
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 940.4 lumens  
Efficiency: N/A  
Efficacy: 54.4 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 (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°	5948	5948	5948
5°	5896	5843	5837
10°	5845	5614	5467
15°	5772	5277	4951
20°	5679	4866	4326
25°	5554	4382	3610
30°	5415	3846	2869
35°	5262	3261	2136
40°	5101	2657	1424
45°	4924	2029	784
50°	4755	1388	217
55°	4566	752	142
60°	4339	233	81
65°	4056	153	42
70°	3666	67	18
75°	3156	24	0
80°	2383	0	0
85°	1004	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4924 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.1	6.6
10°-20°	163.0	17.3
20°-30°	210.6	22.4
30°-40°	201.3	21.4
40°-50°	150.5	16.0
50°-60°	89.6	9.5
60°-70°	45.5	4.8
70°-80°	15.8	1.7
80°-90°	2.2	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°	435.6	46.3
0°-40°	636.9	67.7
0°-60°	877.0	93.3
0°-90°	940.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	940.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	664	670	658	655	658	63
15°	631	617	576	550	541	178
25°	569	530	449	390	370	262
35°	488	420	302	225	198	305
45°	394	302	162	86	63	304
55°	296	184	49	11	9	264
65°	194	74	7	3	2	192
75°	92	10	1	1	0	98
85°	10	0	0	0	0	16
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	672.8	672.8	672.8	672.8	672.8
2.5°	666.2	674.2	667.6	668.2	668.9
5°	664.3	669.5	658.3	655.0	657.7
7.5°	659.0	661.0	644.5	635.9	636.6
10°	651.1	649.1	625.3	610.8	608.9
12.5°	641.8	635.2	602.3	581.1	576.5
15°	630.6	617.4	576.5	549.5	540.9
17.5°	617.4	598.3	548.2	512.5	502.0
20°	603.6	577.2	517.2	473.0	459.8
22.5°	587.1	553.4	483.5	431.4	414.9
25°	569.3	529.7	449.2	389.8	370.1
27.5°	550.8	504.0	412.9	347.6	324.5
30°	530.4	476.9	376.7	304.8	281.0
32.5°	509.2	449.2	339.1	265.2	238.8
35°	487.5	420.2	302.1	224.9	197.9
37.5°	465.0	391.2	266.5	186.7	159.0
40°	442.0	361.5	230.2	150.4	123.4
42.5°	419.5	331.8	195.9	116.1	91.0
45°	393.8	302.1	162.3	86.4	62.7
47.5°	370.7	273.1	129.9	58.7	36.9
50°	345.7	242.1	100.9	34.3	15.8
52.5°	320.6	213.1	73.9	15.2	11.9
55°	296.2	184.0	48.8	11.2	9.2
57.5°	270.5	155.0	26.4	8.6	6.6
60°	245.4	126.7	13.2	6.6	4.6
62.5°	219.7	99.6	10.6	4.0	2.6
65°	193.9	74.5	7.3	2.6	2.0
67.5°	168.2	50.8	4.6	1.3	0.7
70°	141.8	31.0	2.6	0.7	0.7
72.5°	116.8	15.8	1.3	0.7	0.7
75°	92.4	9.9	0.7	0.7	0.0
77.5°	68.6	5.3	0.7	0.7	0.0
80°	46.8	2.0	0.0	0.0	0.0
82.5°	27.0	0.7	0.0	0.0	0.0
85°	9.9	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	16.65	17.98	17.02	18.29	18.61	0.00	0.00	0.00	0.00	0.00
	3H	18.19	19.37	18.57	19.70	20.06	0.00	0.00	0.00	0.00	0.00
	4H	18.79	19.88	19.19	20.23	20.62	0.00	0.00	0.00	0.00	0.00
	6H	19.20	20.21	19.62	20.58	20.97	0.00	0.00	0.00	0.00	0.00
	8H	19.30	20.26	19.73	20.65	21.05	0.00	0.00	0.00	0.00	0.00
	12H	19.32	20.23	19.75	20.61	21.05	0.00	0.00	0.00	0.00	0.00
4H	2H	16.43	17.52	16.83	17.87	18.26	0.00	0.00	0.00	0.00	0.00
	3H	17.99	18.89	18.40	19.29	19.69	0.00	0.00	0.00	0.00	0.00
	4H	18.58	19.37	19.01	19.79	20.24	0.00	0.00	0.00	0.00	0.00
	6H	19.04	19.72	19.50	20.17	20.63	0.00	0.00	0.00	0.00	0.00
	8H	19.16	19.80	19.62	20.24	20.71	0.00	0.00	0.00	0.00	0.00
	12H	19.19	19.76	19.68	20.24	20.72	0.00	0.00	0.00	0.00	0.00
8H	4H	18.44	19.08	18.91	19.53	20.00	0.00	0.00	0.00	0.00	0.00
	6H	18.88	19.40	19.38	19.90	20.38	0.00	0.00	0.00	0.00	0.00
	8H	19.00	19.46	19.52	19.98	20.47	0.00	0.00	0.00	0.00	0.00
	12H	19.05	19.46	19.56	19.95	20.52	0.00	0.00	0.00	0.00	0.00
12H	4H	18.39	18.96	18.88	19.44	19.92	0.00	0.00	0.00	0.00	0.00
	6H	18.82	19.29	19.34	19.80	20.29	0.00	0.00	0.00	0.00	0.00
	8H	18.95	19.37	19.47	19.86	20.43	0.00	0.00	0.00	0.00	0.00