

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: P1056034

Luminaire Tested: S124R3DR-S575D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056034
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-S575D830-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

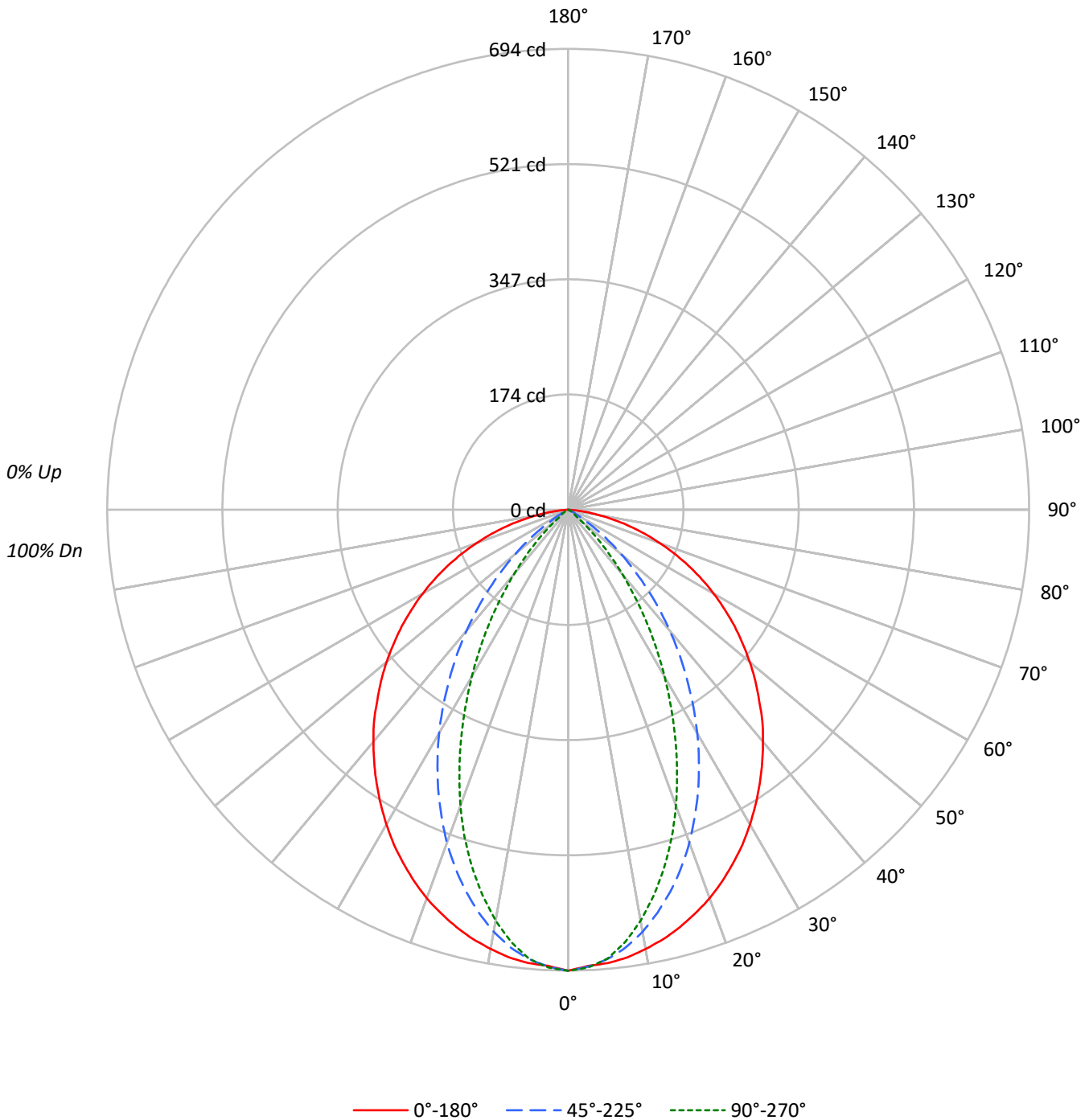
Lumens per Lamp: N/A
Luminaire Lumens: 970.4 lumens
Efficiency: N/A
Efficacy: 50.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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°	6139	6139	6139
5°	6083	6029	6023
10°	6031	5793	5640
15°	5956	5445	5108
20°	5860	5021	4464
25°	5730	4522	3725
30°	5586	3968	2961
35°	5429	3364	2204
40°	5263	2741	1469
45°	5080	2093	809
50°	4906	1432	224
55°	4711	777	146
60°	4477	240	85
65°	4186	157	42
70°	3782	70	18
75°	3255	24	0
80°	2459	0	0
85°	1035	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5080 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.0	6.6
10°-20°	168.1	17.3
20°-30°	217.3	22.4
30°-40°	207.7	21.4
40°-50°	155.3	16.0
50°-60°	92.4	9.5
60°-70°	46.9	4.8
70°-80°	16.3	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°	449.5	46.3
0°-40°	657.1	67.7
0°-60°	904.9	93.3
0°-90°	970.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	970.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	685	691	679	676	679	65
15°	651	637	595	567	558	183
25°	587	547	464	402	382	271
35°	503	434	312	232	204	315
45°	406	312	167	89	65	314
55°	306	190	50	12	10	273
65°	200	77	8	3	2	198
75°	95	10	1	1	0	101
85°	10	0	0	0	0	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	694.3	694.3	694.3	694.3	694.3
2.5°	687.5	695.6	688.8	689.5	690.2
5°	685.4	690.9	679.3	675.9	678.6
7.5°	680.0	682.0	665.0	656.1	656.8
10°	671.8	669.8	645.3	630.3	628.2
12.5°	662.3	655.5	621.4	599.7	594.9
15°	650.7	637.1	594.9	567.0	558.1
17.5°	637.1	617.3	565.6	528.9	518.0
20°	622.8	595.6	533.6	488.0	474.4
22.5°	605.8	571.1	498.9	445.1	428.1
25°	587.4	546.6	463.5	402.3	381.8
27.5°	568.3	520.0	426.1	358.7	334.9
30°	547.2	492.1	388.7	314.5	290.0
32.5°	525.5	463.5	349.9	273.6	246.4
35°	503.0	433.6	311.7	232.1	204.2
37.5°	479.9	403.6	275.0	192.6	164.0
40°	456.0	373.0	237.5	155.2	127.3
42.5°	432.9	342.4	202.2	119.8	93.9
45°	406.3	311.7	167.4	89.2	64.7
47.5°	382.5	281.8	134.1	60.6	38.1
50°	356.7	249.8	104.1	35.4	16.3
52.5°	330.8	219.8	76.2	15.7	12.3
55°	305.6	189.9	50.4	11.6	9.5
57.5°	279.1	160.0	27.2	8.8	6.8
60°	253.2	130.7	13.6	6.8	4.8
62.5°	226.7	102.8	10.9	4.1	2.7
65°	200.1	76.9	7.5	2.7	2.0
67.5°	173.6	52.4	4.8	1.4	0.7
70°	146.3	32.0	2.7	0.7	0.7
72.5°	120.5	16.3	1.4	0.7	0.7
75°	95.3	10.2	0.7	0.7	0.0
77.5°	70.8	5.4	0.7	0.7	0.0
80°	48.3	2.0	0.0	0.0	0.0
82.5°	27.9	0.7	0.0	0.0	0.0
85°	10.2	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	16.76	18.09	17.13	18.40	18.72	0.00	0.00	0.00	0.00	0.00
	3H	18.30	19.48	18.68	19.81	20.17	0.00	0.00	0.00	0.00	0.00
	4H	18.90	19.99	19.30	20.34	20.73	0.00	0.00	0.00	0.00	0.00
	6H	19.31	20.32	19.73	20.69	21.08	0.00	0.00	0.00	0.00	0.00
	8H	19.41	20.36	19.84	20.76	21.16	0.00	0.00	0.00	0.00	0.00
	12H	19.43	20.34	19.86	20.72	21.15	0.00	0.00	0.00	0.00	0.00
4H	2H	16.54	17.63	16.94	17.99	18.37	0.00	0.00	0.00	0.00	0.00
	3H	18.10	19.00	18.51	19.40	19.80	0.00	0.00	0.00	0.00	0.00
	4H	18.68	19.48	19.12	19.90	20.34	0.00	0.00	0.00	0.00	0.00
	6H	19.14	19.83	19.61	20.28	20.74	0.00	0.00	0.00	0.00	0.00
	8H	19.26	19.91	19.73	20.35	20.82	0.00	0.00	0.00	0.00	0.00
	12H	19.30	19.87	19.79	20.35	20.83	0.00	0.00	0.00	0.00	0.00
8H	4H	18.55	19.19	19.02	19.64	20.11	0.00	0.00	0.00	0.00	0.00
	6H	18.99	19.51	19.49	20.01	20.49	0.00	0.00	0.00	0.00	0.00
	8H	19.11	19.57	19.63	20.09	20.58	0.00	0.00	0.00	0.00	0.00
	12H	19.15	19.57	19.67	20.06	20.63	0.00	0.00	0.00	0.00	0.00
12H	4H	18.50	19.07	18.99	19.55	20.03	0.00	0.00	0.00	0.00	0.00
	6H	18.93	19.40	19.45	19.91	20.40	0.00	0.00	0.00	0.00	0.00
	8H	19.06	19.47	19.58	19.97	20.54	0.00	0.00	0.00	0.00	0.00