

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: P1056197

Luminaire Tested: S124R3DR-H795D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056197
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H795D830-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

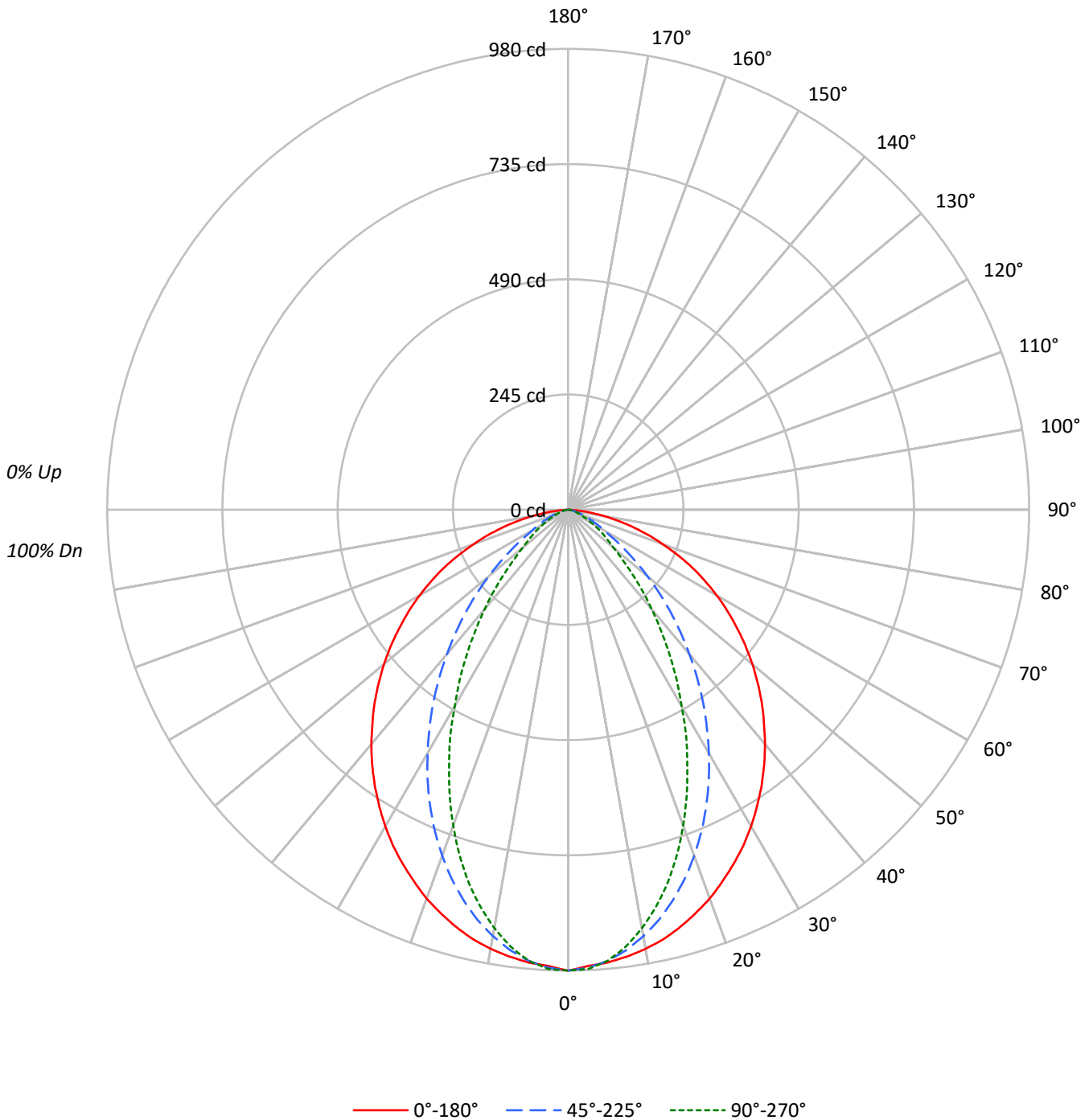
Lumens per Lamp: N/A
Luminaire Lumens: 1585.1 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89					89			
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78					78			
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68					68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60					60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48					48			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37					37			
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34					34			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8667	8667	8667
5°	8579	8546	8546
10°	8514	8268	8112
15°	8413	7870	7502
20°	8279	7368	6724
25°	8112	6776	5842
30°	7939	6103	4920
35°	7733	5389	4049
40°	7511	4625	3192
45°	7281	3846	2386
50°	7030	3026	1745
55°	6753	2237	1393
60°	6456	1549	1065
65°	6071	1203	782
70°	5498	850	613
75°	4803	591	468
80°	3859	463	418
85°	2130	375	375

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7281 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	5.7
10°-20°	242.9	15.3
20°-30°	324.0	20.4
30°-40°	326.3	20.6
40°-50°	267.6	16.9
50°-60°	182.9	11.5
60°-70°	102.2	6.4
70°-80°	40.5	2.6
80°-90°	7.7	0.5
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°	657.9	41.5
0°-40°	984.2	62.1
0°-60°	1434.6	90.5
0°-90°	1585.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1585.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	980	980	980	980	980	
5°	967	978	963	958	963	92
15°	919	909	860	830	820	259
25°	832	790	695	624	599	383
35°	716	641	499	404	375	448
45°	582	476	308	216	191	449
55°	438	308	145	97	90	392
65°	290	146	58	41	37	287
75°	141	38	17	15	14	151
85°	21	4	4	4	4	30
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	980.3	980.3	980.3	980.3	980.3
2.5°	971.1	983.0	974.8	975.7	977.5
5°	966.6	977.5	962.9	958.4	962.9
7.5°	958.4	966.6	944.7	935.5	937.4
10°	948.3	951.1	920.9	905.4	903.6
12.5°	935.5	931.9	892.6	869.8	864.4
15°	919.1	909.1	859.8	829.7	819.6
17.5°	900.0	882.6	823.3	784.0	769.4
20°	879.9	854.3	783.1	732.9	714.7
22.5°	856.1	824.2	740.2	679.1	658.1
25°	831.5	790.4	694.6	624.3	598.8
27.5°	805.9	755.7	647.1	568.6	543.1
30°	777.6	718.3	597.8	513.0	481.9
32.5°	747.5	680.0	548.6	458.2	429.0
35°	716.5	640.7	499.3	404.3	375.1
37.5°	684.5	600.6	450.0	353.2	324.0
40°	650.8	559.5	400.7	304.9	276.6
42.5°	616.1	517.5	353.2	259.2	232.7
45°	582.3	475.5	307.6	216.3	190.8
47.5°	546.7	433.5	262.9	176.2	154.3
50°	511.1	391.6	220.0	141.5	126.9
52.5°	474.6	349.6	180.7	115.9	105.9
55°	438.1	307.6	145.1	96.7	90.4
57.5°	401.6	265.6	112.3	82.1	74.8
60°	365.1	224.5	87.6	66.6	60.2
62.5°	327.7	183.5	72.1	52.9	47.5
65°	290.2	146.0	57.5	41.1	37.4
67.5°	252.8	111.4	43.8	31.9	29.2
70°	212.7	79.4	32.9	24.6	23.7
72.5°	178.0	53.9	23.7	19.2	18.3
75°	140.6	38.3	17.3	14.6	13.7
77.5°	108.6	24.6	12.8	11.9	11.0
80°	75.8	13.7	9.1	8.2	8.2
82.5°	46.5	7.3	6.4	5.5	5.5
85°	21.0	3.7	3.7	3.7	3.7
87.5°	3.7	1.8	1.8	1.8	1.8
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	18.23	19.63	18.59	19.95	20.26	9.31	10.72	9.68	11.03	11.35
	3H	19.81	21.06	20.19	21.39	21.76	9.90	11.16	10.28	11.48	11.85
	4H	20.41	21.58	20.81	21.93	22.31	10.06	11.23	10.46	11.58	11.96
	6H	20.84	21.92	21.25	22.28	22.68	10.17	11.25	10.58	11.61	12.01
	8H	20.95	21.97	21.38	22.36	22.77	10.19	11.21	10.62	11.60	12.00
	12H	21.00	21.97	21.43	22.35	22.78	10.20	11.17	10.63	11.56	11.99
4H	2H	18.08	19.25	18.48	19.60	19.98	9.90	11.07	10.30	11.42	11.80
	3H	19.73	20.69	20.14	21.09	21.49	10.61	11.57	11.02	11.97	12.37
	4H	20.33	21.19	20.77	21.61	22.05	10.81	11.67	11.25	12.09	12.53
	6H	20.83	21.57	21.29	22.01	22.48	10.98	11.72	11.44	12.17	12.63
	8H	20.97	21.66	21.44	22.11	22.58	11.01	11.71	11.48	12.15	12.62
	12H	21.04	21.66	21.53	22.14	22.61	11.04	11.65	11.53	12.14	12.61
8H	4H	20.23	20.92	20.69	21.37	21.84	11.08	11.78	11.55	12.22	12.69
	6H	20.71	21.28	21.21	21.77	22.25	11.29	11.86	11.79	12.35	12.83
	8H	20.85	21.36	21.37	21.87	22.37	11.35	11.86	11.87	12.37	12.86
	12H	20.94	21.39	21.46	21.89	22.46	11.41	11.86	11.92	12.35	12.92
12H	4H	20.19	20.80	20.67	21.28	21.76	11.11	11.73	11.60	12.21	12.68
	6H	20.65	21.16	21.17	21.68	22.17	11.32	11.83	11.84	12.34	12.83
	8H	20.82	21.27	21.33	21.76	22.33	11.41	11.86	11.93	12.35	12.92