

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: P1056221

Luminaire Tested: S124R3DR-H795D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056221
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-H795D950-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

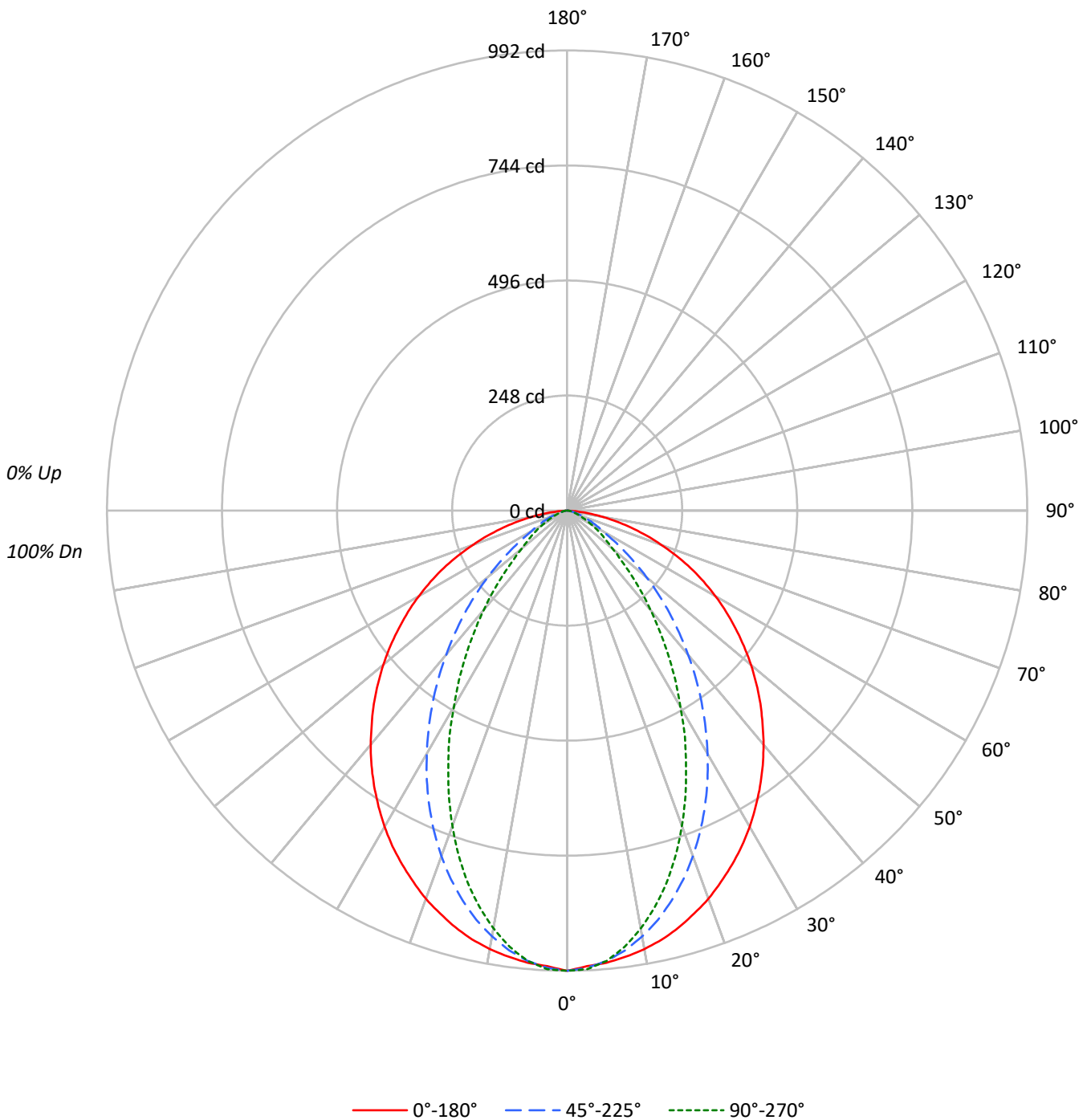
Lumens per Lamp: N/A
Luminaire Lumens: 1604.3 lumens
Efficiency: N/A
Efficacy: 67.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8772	8772	8772
5°	8683	8650	8650
10°	8618	8368	8211
15°	8515	7965	7594
20°	8379	7457	6806
25°	8210	6858	5912
30°	8036	6178	4980
35°	7827	5454	4098
40°	7602	4681	3230
45°	7370	3892	2414
50°	7115	3062	1766
55°	6835	2264	1410
60°	6534	1568	1079
65°	6146	1218	793
70°	5566	861	620
75°	4861	601	475
80°	3905	468	423
85°	2151	375	375

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7370 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	5.7
10°-20°	245.9	15.3
20°-30°	328.0	20.4
30°-40°	330.2	20.6
40°-50°	270.8	16.9
50°-60°	185.1	11.5
60°-70°	103.4	6.4
70°-80°	41.0	2.6
80°-90°	7.8	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°	665.9	41.5
0°-40°	996.1	62.1
0°-60°	1452.1	90.5
0°-90°	1604.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1604.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	978	989	975	970	975	93
15°	930	920	870	840	830	262
25°	842	800	703	632	606	388
35°	725	648	505	409	380	454
45°	589	481	311	219	193	454
55°	443	311	147	98	92	397
65°	294	148	58	42	38	290
75°	142	39	18	15	14	152
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°	992.2	992.2	992.2	992.2	992.2
2.5°	983.0	995.0	986.6	987.6	989.4
5°	978.3	989.4	974.6	970.0	974.6
7.5°	970.0	978.3	956.2	946.9	948.8
10°	959.9	962.6	932.1	916.4	914.6
12.5°	946.9	943.2	903.5	880.4	874.9
15°	930.3	920.1	870.2	839.8	829.6
17.5°	910.9	893.3	833.3	793.6	778.8
20°	890.6	864.7	792.6	741.8	723.4
22.5°	866.5	834.2	749.2	687.3	666.1
25°	841.6	800.0	703.0	631.9	606.0
27.5°	815.7	764.9	655.0	575.5	549.7
30°	787.1	727.1	605.1	519.2	487.8
32.5°	756.6	688.2	555.2	463.8	434.2
35°	725.2	648.5	505.3	409.3	379.7
37.5°	692.9	607.9	455.4	357.5	328.0
40°	658.7	566.3	405.6	308.6	279.9
42.5°	623.6	523.8	357.5	262.4	235.6
45°	589.4	481.3	311.3	218.9	193.1
47.5°	553.4	438.8	266.1	178.3	156.1
50°	517.3	396.3	222.6	143.2	128.4
52.5°	480.4	353.8	182.9	117.3	107.2
55°	443.4	311.3	146.9	97.9	91.5
57.5°	406.5	268.8	113.6	83.1	75.8
60°	369.5	227.3	88.7	67.4	61.0
62.5°	331.7	185.7	73.0	53.6	48.0
65°	293.8	147.8	58.2	41.6	37.9
67.5°	255.9	112.7	44.3	32.3	29.6
70°	215.3	80.4	33.3	24.9	24.0
72.5°	180.1	54.5	24.0	19.4	18.5
75°	142.3	38.8	17.6	14.8	13.9
77.5°	109.9	24.9	12.9	12.0	11.1
80°	76.7	13.9	9.2	8.3	8.3
82.5°	47.1	7.4	6.5	5.5	5.5
85°	21.2	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	18.27	19.68	18.63	19.99	20.30	9.36	10.76	9.72	11.08	11.39
	3H	19.85	21.11	20.23	21.44	21.80	9.95	11.20	10.33	11.53	11.89
	4H	20.45	21.62	20.85	21.97	22.35	10.11	11.28	10.51	11.63	12.01
	6H	20.88	21.96	21.30	22.33	22.72	10.21	11.29	10.63	11.66	12.05
	8H	20.99	22.02	21.42	22.41	22.81	10.23	11.25	10.66	11.64	12.05
	12H	21.04	22.01	21.47	22.40	22.83	10.24	11.22	10.67	11.60	12.03
4H	2H	18.12	19.29	18.52	19.64	20.02	9.94	11.11	10.34	11.46	11.84
	3H	19.77	20.73	20.18	21.13	21.53	10.65	11.61	11.06	12.01	12.42
	4H	20.38	21.23	20.81	21.65	22.09	10.86	11.72	11.29	12.13	12.57
	6H	20.87	21.61	21.33	22.06	22.52	11.02	11.77	11.48	12.21	12.67
	8H	21.01	21.70	21.48	22.15	22.62	11.06	11.75	11.52	12.19	12.66
	12H	21.08	21.70	21.57	22.18	22.65	11.08	11.69	11.57	12.18	12.65
8H	4H	20.27	20.96	20.74	21.41	21.88	11.13	11.82	11.60	12.27	12.74
	6H	20.75	21.32	21.25	21.81	22.29	11.33	11.90	11.83	12.39	12.87
	8H	20.90	21.40	21.41	21.92	22.41	11.39	11.90	11.91	12.41	12.90
	12H	20.99	21.43	21.50	21.93	22.50	11.45	11.90	11.96	12.39	12.96
12H	4H	20.23	20.84	20.72	21.33	21.80	11.16	11.77	11.64	12.25	12.72
	6H	20.70	21.20	21.21	21.72	22.21	11.36	11.87	11.88	12.38	12.87
	8H	20.86	21.31	21.37	21.80	22.37	11.45	11.90	11.97	12.40	12.96