

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: P1056220

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056220
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-H795D950-X4F0-XX-UDD-F-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

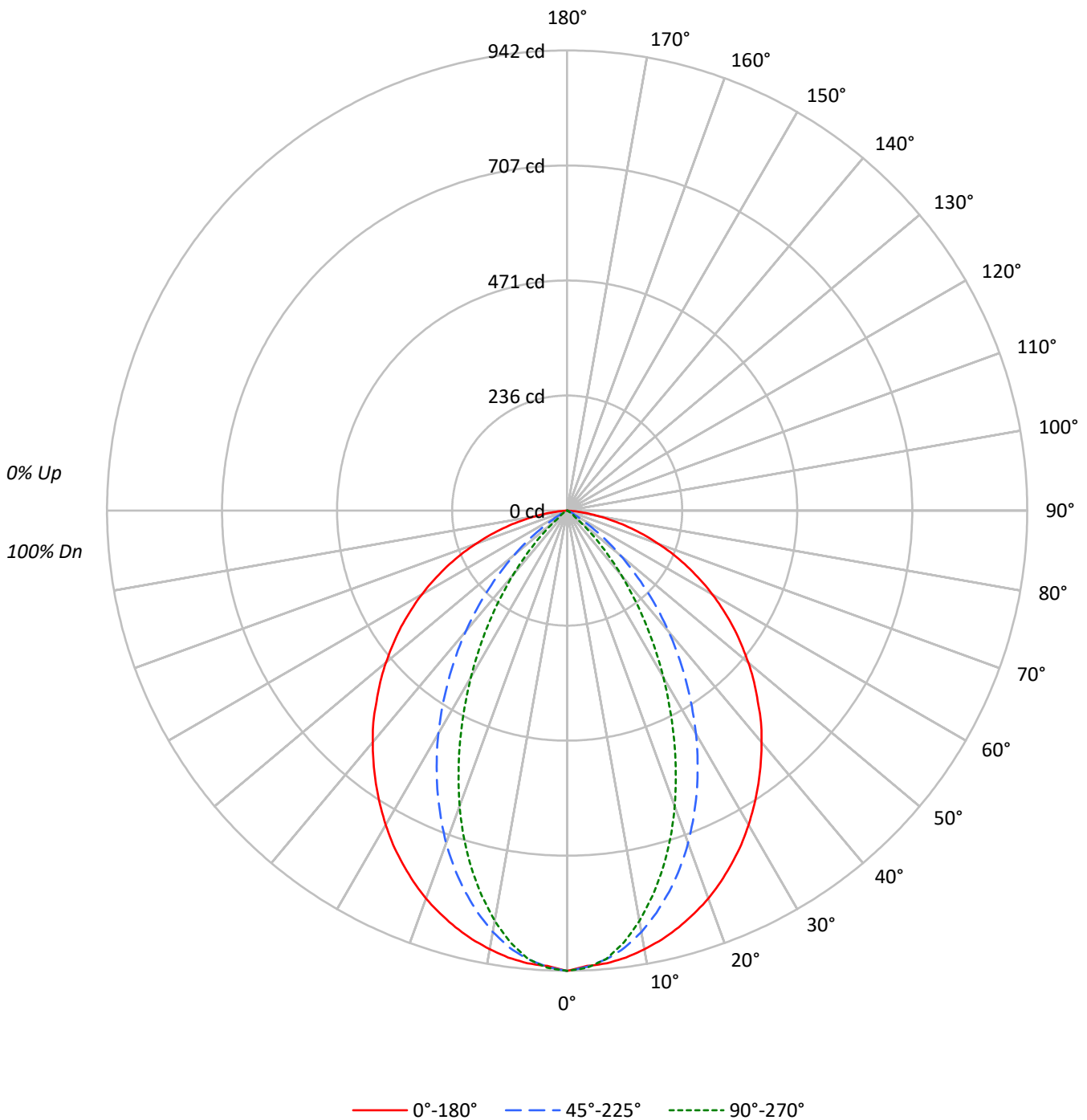
Lumens per Lamp: N/A
Luminaire Lumens: 1317.0 lumens
Efficiency: N/A
Efficacy: 55.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	8331	8331	8331
5°	8257	8183	8175
10°	8186	7863	7655
15°	8084	7390	6934
20°	7953	6815	6058
25°	7778	6137	5056
30°	7583	5385	4017
35°	7369	4567	2991
40°	7144	3721	1994
45°	6896	2842	1098
50°	6659	1944	305
55°	6394	1054	199
60°	6078	327	115
65°	5682	213	59
70°	5134	96	23
75°	4417	31	0
80°	3340	0	0
85°	1410	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6896 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.9	6.6
10°-20°	228.2	17.3
20°-30°	294.9	22.4
30°-40°	281.9	21.4
40°-50°	210.8	16.0
50°-60°	125.4	9.5
60°-70°	63.7	4.8
70°-80°	22.1	1.7
80°-90°	3.0	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°	610.1	46.3
0°-40°	891.9	67.7
0°-60°	1228.2	93.3
0°-90°	1317.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1317.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	942	942	942	942	942	
5°	930	938	922	917	921	88
15°	883	865	807	770	758	249
25°	797	742	629	546	518	367
35°	683	588	423	315	277	427
45°	552	423	227	121	88	426
55°	415	258	68	16	13	370
65°	272	104	10	4	3	269
75°	129	14	1	1	0	137
85°	14	0	0	0	0	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	942.3	942.3	942.3	942.3	942.3
2.5°	933.1	944.1	934.9	935.8	936.8
5°	930.3	937.7	922.0	917.4	921.1
7.5°	922.9	925.7	902.6	890.6	891.5
10°	911.8	909.0	875.8	855.5	852.7
12.5°	898.9	889.6	843.5	813.9	807.4
15°	883.2	864.7	807.4	769.5	757.5
17.5°	864.7	837.9	767.7	717.8	703.0
20°	845.3	808.3	724.3	662.4	643.9
22.5°	822.2	775.1	677.2	604.2	581.1
25°	797.3	741.8	629.1	546.0	518.3
27.5°	771.4	705.8	578.3	486.9	454.5
30°	742.8	667.9	527.5	426.8	393.5
32.5°	713.2	629.1	474.8	371.4	334.4
35°	682.7	588.5	423.1	315.0	277.1
37.5°	651.3	547.8	373.2	261.4	222.6
40°	619.0	506.3	322.4	210.6	172.8
42.5°	587.6	464.7	274.4	162.6	127.5
45°	551.5	423.1	227.3	121.0	87.8
47.5°	519.2	382.5	182.0	82.2	51.7
50°	484.1	339.0	141.3	48.0	22.2
52.5°	449.0	298.4	103.5	21.2	16.6
55°	414.8	257.7	68.4	15.7	12.9
57.5°	378.8	217.1	37.0	12.0	9.2
60°	343.7	177.4	18.5	9.2	6.5
62.5°	307.6	139.5	14.8	5.5	3.7
65°	271.6	104.4	10.2	3.7	2.8
67.5°	235.6	71.1	6.5	1.8	0.9
70°	198.6	43.4	3.7	0.9	0.9
72.5°	163.5	22.2	1.8	0.9	0.9
75°	129.3	13.9	0.9	0.9	0.0
77.5°	96.1	7.4	0.9	0.9	0.0
80°	65.6	2.8	0.0	0.0	0.0
82.5°	37.9	0.9	0.0	0.0	0.0
85°	13.9	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	17.82	19.15	18.19	19.46	19.78	0.00	0.00	0.00	0.00	0.00
	3H	19.36	20.54	19.74	20.87	21.23	0.00	0.00	0.00	0.00	0.00
	4H	19.96	21.05	20.36	21.40	21.79	0.00	0.00	0.00	0.00	0.00
	6H	20.37	21.38	20.79	21.75	22.14	0.00	0.00	0.00	0.00	0.00
	8H	20.47	21.43	20.90	21.82	22.22	0.00	0.00	0.00	0.00	0.00
	12H	20.49	21.40	20.93	21.79	22.22	0.00	0.00	0.00	0.00	0.00
4H	2H	17.60	18.69	18.00	19.05	19.43	0.00	0.00	0.00	0.00	0.00
	3H	19.16	20.06	19.57	20.46	20.86	0.00	0.00	0.00	0.00	0.00
	4H	19.75	20.54	20.18	20.96	21.41	0.00	0.00	0.00	0.00	0.00
	6H	20.21	20.89	20.67	21.34	21.81	0.00	0.00	0.00	0.00	0.00
	8H	20.33	20.97	20.80	21.41	21.88	0.00	0.00	0.00	0.00	0.00
	12H	20.37	20.93	20.85	21.41	21.89	0.00	0.00	0.00	0.00	0.00
8H	4H	19.61	20.25	20.08	20.70	21.17	0.00	0.00	0.00	0.20	0.67
	6H	20.05	20.57	20.55	21.07	21.55	0.00	0.00	0.00	0.04	0.52
	8H	20.17	20.64	20.69	21.15	21.64	0.00	0.00	0.00	0.00	0.44
	12H	20.22	20.63	20.73	21.12	21.70	0.00	0.00	0.00	0.00	0.40
12H	4H	19.56	20.13	20.05	20.61	21.09	0.00	0.09	0.01	0.57	1.05
	6H	19.99	20.46	20.51	20.97	21.46	0.00	0.00	0.00	0.40	0.89
	8H	20.12	20.54	20.64	21.03	21.60	0.00	0.00	0.00	0.28	0.85