

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: P1056128

Luminaire Tested: S124R3DR-H1195D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056128
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-H1195D927-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

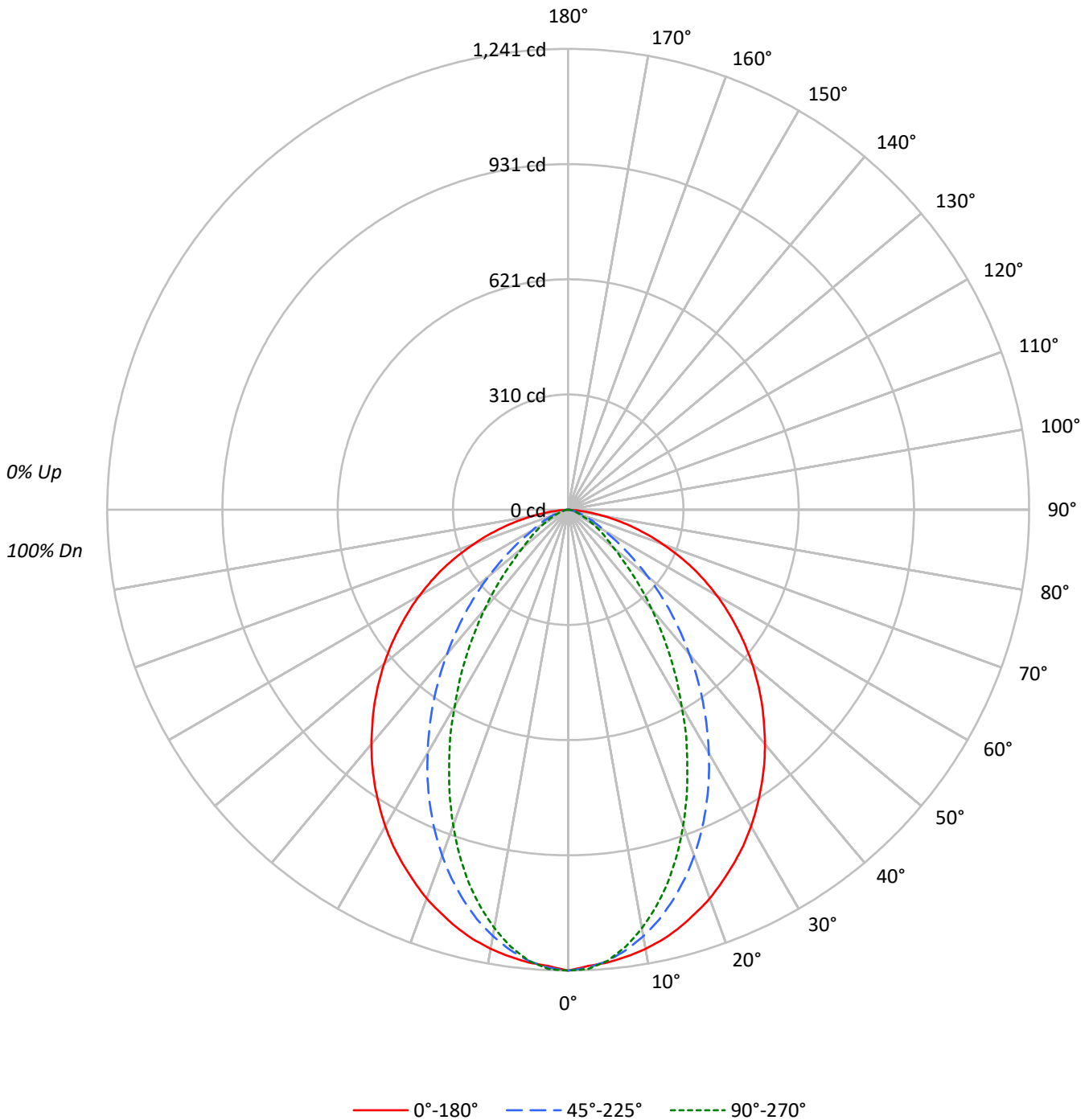
Lumens per Lamp: N/A
Luminaire Lumens: 2007.0 lumens
Efficiency: N/A
Efficacy: 54.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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°	10974	10974	10974
5°	10862	10821	10821
10°	10781	10469	10271
15°	10653	9965	9499
20°	10482	9330	8514
25°	10270	8580	7396
30°	10053	7728	6230
35°	9792	6824	5127
40°	9510	5856	4042
45°	9219	4870	3020
50°	8902	3831	2209
55°	8550	2833	1763
60°	8175	1961	1349
65°	7688	1523	992
70°	6962	1075	776
75°	6081	752	591
80°	4883	591	530
85°	2698	467	467

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9219 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	5.7
10°-20°	307.6	15.3
20°-30°	410.3	20.4
30°-40°	413.1	20.6
40°-50°	338.8	16.9
50°-60°	231.6	11.5
60°-70°	129.4	6.4
70°-80°	51.3	2.6
80°-90°	9.7	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°	833.1	41.5
0°-40°	1246.2	62.1
0°-60°	1816.6	90.5
0°-90°	2007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2007.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1224	1238	1219	1214	1219	116
15°	1164	1151	1089	1050	1038	328
25°	1053	1001	880	790	758	485
35°	907	811	632	512	475	567
45°	737	602	390	274	242	568
55°	555	390	184	122	114	496
65°	368	185	73	52	47	363
75°	178	48	22	18	17	191
85°	27	5	5	5	5	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.2	1241.2	1241.2	1241.2	1241.2
2.5°	1229.7	1244.7	1234.3	1235.4	1237.8
5°	1223.9	1237.8	1219.3	1213.5	1219.3
7.5°	1213.5	1223.9	1196.1	1184.6	1186.9
10°	1200.8	1204.2	1166.1	1146.5	1144.1
12.5°	1184.6	1180.0	1130.3	1101.4	1094.4
15°	1163.8	1151.1	1088.7	1050.5	1037.8
17.5°	1139.5	1117.6	1042.4	992.7	974.3
20°	1114.1	1081.7	991.6	928.0	904.9
22.5°	1084.0	1043.6	937.3	859.8	833.3
25°	1052.8	1000.8	879.5	790.5	758.1
27.5°	1020.5	956.9	819.4	720.0	687.6
30°	984.7	909.5	757.0	649.5	610.2
32.5°	946.5	861.0	694.6	580.2	543.2
35°	907.2	811.3	632.2	512.0	475.0
37.5°	866.8	760.5	569.8	447.3	410.3
40°	824.0	708.4	507.4	386.0	350.2
42.5°	780.1	655.3	447.3	328.2	294.7
45°	737.3	602.1	389.5	273.9	241.5
47.5°	692.3	549.0	332.8	223.0	195.3
50°	647.2	495.8	278.5	179.1	160.6
52.5°	601.0	442.6	228.8	146.8	134.1
55°	554.7	389.5	183.8	122.5	114.4
57.5°	508.5	336.3	142.2	104.0	94.8
60°	462.3	284.3	110.9	84.4	76.3
62.5°	414.9	232.3	91.3	67.0	60.1
65°	367.5	184.9	72.8	52.0	47.4
67.5°	320.1	141.0	55.5	40.4	37.0
70°	269.3	100.5	41.6	31.2	30.0
72.5°	225.4	68.2	30.0	24.3	23.1
75°	178.0	48.5	22.0	18.5	17.3
77.5°	137.5	31.2	16.2	15.0	13.9
80°	95.9	17.3	11.6	10.4	10.4
82.5°	58.9	9.2	8.1	6.9	6.9
85°	26.6	4.6	4.6	4.6	4.6
87.5°	4.6	2.3	2.3	2.3	2.3
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	19.05	20.45	19.41	20.77	21.08	10.14	11.54	10.50	11.86	12.17
	3H	20.63	21.88	21.01	22.21	22.58	10.73	11.98	11.11	12.31	12.67
	4H	21.23	22.40	21.63	22.75	23.13	10.88	12.05	11.29	12.40	12.78
	6H	21.66	22.73	22.07	23.10	23.50	10.99	12.07	11.41	12.44	12.83
	8H	21.77	22.79	22.20	23.18	23.59	11.01	12.03	11.44	12.42	12.83
	12H	21.81	22.79	22.25	23.17	23.60	11.02	11.99	11.45	12.38	12.81
4H	2H	18.90	20.07	19.30	20.42	20.80	10.72	11.89	11.12	12.24	12.62
	3H	20.55	21.51	20.96	21.91	22.31	11.43	12.39	11.84	12.79	13.20
	4H	21.15	22.01	21.59	22.43	22.87	11.64	12.49	12.07	12.91	13.35
	6H	21.65	22.39	22.11	22.83	23.30	11.80	12.54	12.26	12.99	13.45
	8H	21.79	22.48	22.26	22.93	23.40	11.83	12.53	12.30	12.97	13.44
	12H	21.86	22.48	22.35	22.96	23.43	11.86	12.47	12.34	12.95	13.43
8H	4H	21.05	21.74	21.51	22.19	22.65	11.91	12.60	12.37	13.04	13.51
	6H	21.53	22.09	22.03	22.59	23.07	12.11	12.68	12.61	13.17	13.65
	8H	21.67	22.18	22.19	22.69	23.18	12.17	12.68	12.69	13.19	13.68
	12H	21.76	22.21	22.28	22.71	23.27	12.23	12.67	12.74	13.17	13.74
12H	4H	21.01	21.62	21.49	22.10	22.58	11.93	12.55	12.42	13.03	13.50
	6H	21.47	21.98	21.99	22.50	22.99	12.14	12.65	12.66	13.16	13.65
	8H	21.64	22.09	22.15	22.58	23.15	12.23	12.68	12.75	13.17	13.74