

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: P1056117

Luminaire Tested: S124R3DR-H1195D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056117
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H1195D830-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

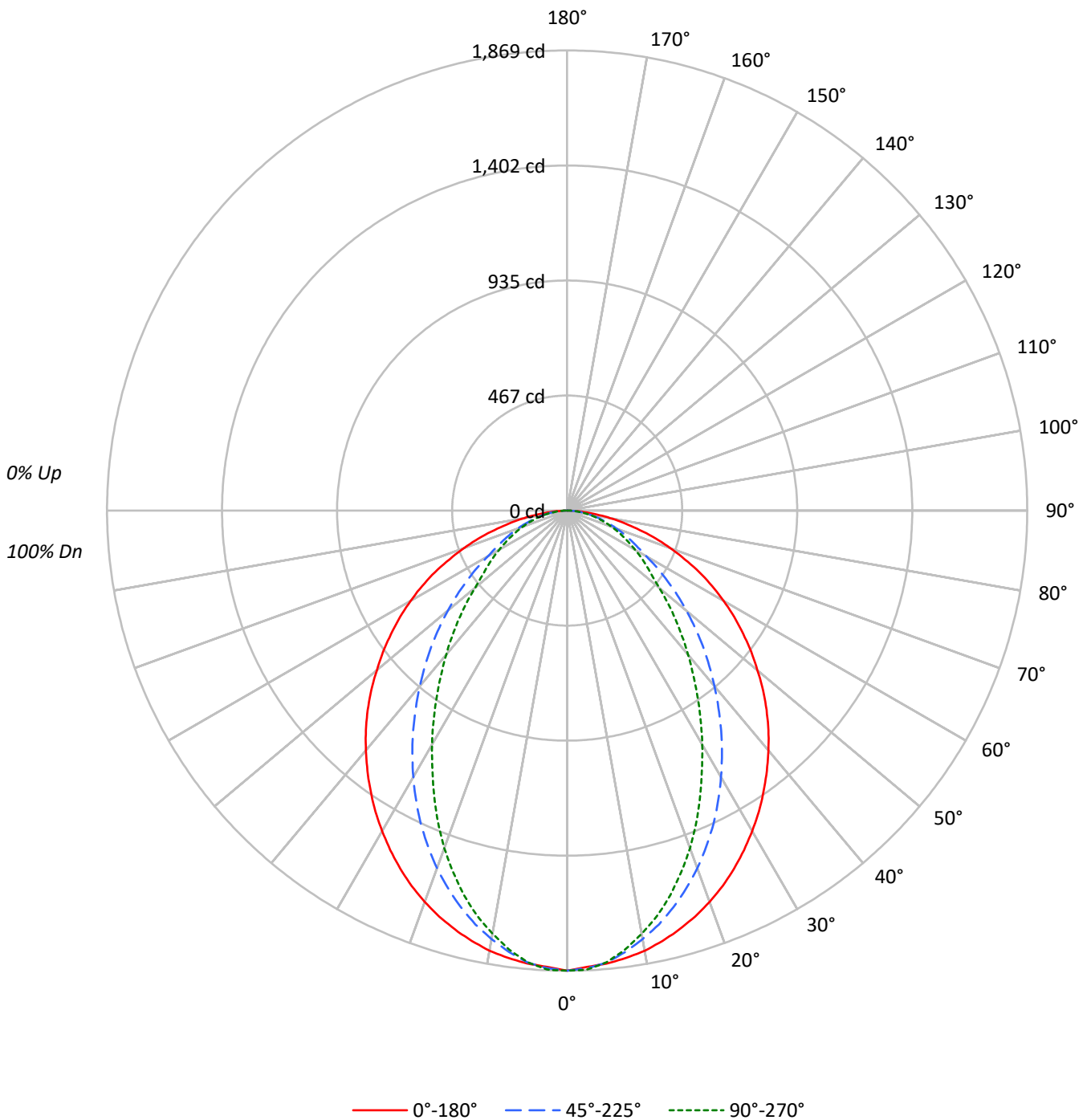
Lumens per Lamp: N/A
Luminaire Lumens: 3722.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1056117

CATALOG NUMBER: S124R3DR-H1195D830-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056117

CATALOG NUMBER: S124R3DR-H1195D830-X4F0-XX-UDD-F-W

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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76					73				
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65					63				
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57					55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51					49				
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45					43				
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41					39				
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37					35				
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34					32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31					29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16522	16522	16522
5°	16390	16353	16341
10°	16296	15864	15666
15°	16123	15267	14802
20°	15913	14542	13726
25°	15654	13709	12475
30°	15343	12760	11202
35°	15020	11769	9973
40°	14680	10744	8824
45°	14322	9749	7755
50°	13883	8700	6696
55°	13460	7652	6083
60°	12984	6566	5641
65°	12400	5954	5264
70°	11516	5509	4976
75°	10429	5073	4697
80°	9104	4689	4409
85°	6979	4321	4048

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14322 cd/sqm



TEST NUMBER: P1056117

CATALOG NUMBER: S124R3DR-H1195D830-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.0	4.7
10°-20°	471.9	12.7
20°-30°	653.4	17.6
30°-40°	701.3	18.8
40°-50°	637.8	17.1
50°-60°	502.3	13.5
60°-70°	343.8	9.2
70°-80°	185.0	5.0
80°-90°	52.4	1.4
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°	1299.3	34.9
0°-40°	2000.7	53.8
0°-60°	3140.8	84.4
0°-90°	3722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1869	1869	1869	1869	1869	
5°	1847	1867	1843	1833	1841	175
15°	1762	1742	1668	1623	1617	497
25°	1605	1539	1405	1304	1279	739
35°	1392	1283	1090	958	924	870
45°	1145	1000	780	645	620	883
55°	873	707	496	400	395	781
65°	593	424	285	253	252	585
75°	305	186	148	136	138	326
85°	69	47	43	40	40	83
90°	0	0	0	0	0	

TEST NUMBER: P1056117

CATALOG NUMBER: S124R3DR-H1195D830-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1868.7	1868.7	1868.7	1868.7	1868.7
2.5°	1855.0	1877.0	1860.5	1863.2	1866.0
5°	1846.7	1867.3	1842.6	1833.0	1841.2
7.5°	1833.0	1846.7	1808.2	1790.3	1798.6
10°	1815.1	1817.8	1767.0	1740.8	1745.0
12.5°	1790.3	1783.5	1721.6	1684.4	1687.2
15°	1761.5	1742.2	1667.9	1622.6	1617.1
17.5°	1728.5	1696.8	1608.8	1551.1	1540.1
20°	1691.3	1648.7	1545.6	1471.3	1458.9
22.5°	1650.1	1595.1	1476.8	1388.8	1370.9
25°	1604.7	1538.7	1405.3	1303.6	1278.8
27.5°	1555.2	1478.2	1328.3	1216.9	1185.3
30°	1502.9	1414.9	1249.9	1130.3	1097.3
32.5°	1449.3	1350.3	1170.2	1043.7	1009.3
35°	1391.6	1282.9	1090.4	958.4	924.0
37.5°	1332.4	1212.8	1009.3	875.9	840.2
40°	1271.9	1142.7	930.9	793.4	764.5
42.5°	1210.1	1071.2	853.9	716.4	690.3
45°	1145.4	999.7	779.7	644.9	620.2
47.5°	1079.4	926.8	704.0	577.5	554.1
50°	1009.3	853.9	632.5	511.5	486.8
52.5°	941.9	779.7	563.8	446.9	434.5
55°	873.2	706.8	496.4	400.1	394.6
57.5°	804.4	633.9	434.5	363.0	357.5
60°	734.3	562.4	371.3	324.5	319.0
62.5°	664.2	492.3	324.5	287.4	284.6
65°	592.7	423.5	284.6	253.0	251.6
67.5°	517.0	357.5	248.9	222.8	221.4
70°	445.5	291.5	213.1	192.5	192.5
72.5°	378.1	231.0	180.1	163.6	163.6
75°	305.3	185.6	148.5	136.1	137.5
77.5°	240.6	145.8	119.6	111.4	111.4
80°	178.8	108.6	92.1	85.3	86.6
82.5°	121.0	75.6	66.0	61.9	61.9
85°	68.8	46.8	42.6	39.9	39.9
87.5°	24.8	22.0	20.6	17.9	19.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056117
 CATALOG NUMBER: S124R3DR-H1195D830-X4F0-XX-UDD-F-W

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	20.89	22.41	21.25	22.72	23.04	16.66	18.19	17.03	18.50	18.82
	3H	22.66	24.03	23.04	24.36	24.72	18.27	19.64	18.65	19.97	20.33
	4H	23.33	24.62	23.73	24.97	25.35	18.91	20.19	19.31	20.54	20.92
	6H	23.84	25.03	24.25	25.40	25.79	19.41	20.59	19.82	20.96	21.35
	8H	24.01	25.14	24.43	25.53	25.93	19.58	20.71	20.00	21.10	21.50
	12H	24.10	25.19	24.54	25.57	26.00	19.70	20.78	20.13	21.16	21.59
4H	2H	20.98	22.27	21.38	22.62	22.99	17.38	18.67	17.78	19.02	19.39
	3H	22.93	24.00	23.34	24.40	24.80	19.19	20.26	19.60	20.66	21.06
	4H	23.68	24.65	24.11	25.06	25.50	19.93	20.89	20.36	21.31	21.74
	6H	24.32	25.16	24.77	25.60	26.06	20.54	21.38	21.00	21.82	22.28
	8H	24.54	25.32	25.00	25.76	26.23	20.76	21.54	21.22	21.99	22.45
	12H	24.69	25.39	25.17	25.87	26.34	20.93	21.63	21.41	22.11	22.58
8H	4H	23.74	24.52	24.20	24.97	25.43	20.31	21.10	20.78	21.54	22.01
	6H	24.44	25.09	24.93	25.58	26.06	21.05	21.70	21.54	22.19	22.66
	8H	24.71	25.29	25.22	25.80	26.29	21.34	21.92	21.85	22.43	22.92
	12H	24.92	25.44	25.43	25.93	26.50	21.58	22.10	22.09	22.59	23.15
12H	4H	23.73	24.43	24.21	24.91	25.38	20.37	21.07	20.85	21.55	22.02
	6H	24.43	25.01	24.94	25.52	26.01	21.13	21.71	21.64	22.22	22.71
	8H	24.74	25.25	25.25	25.75	26.31	21.48	21.99	21.99	22.49	23.05