

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: P1056120

Luminaire Tested: S124R3DR-H1195D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056120  
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-H1195D835-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

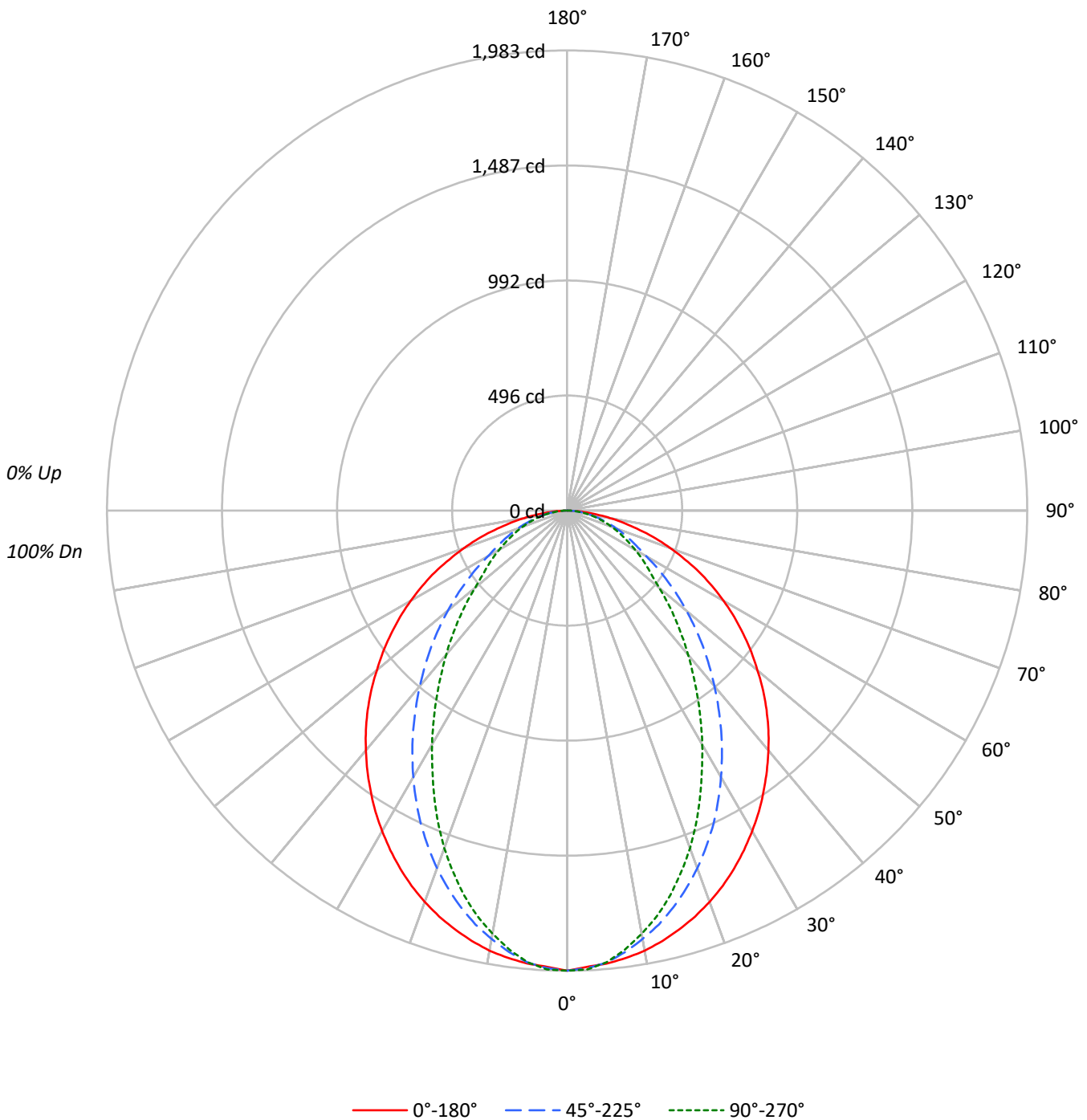
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3948.9 lumens  
Efficiency: N/A  
Efficacy: 107.9 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 (A<sub>in</sub>): 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: P1056120

CATALOG NUMBER: S124R3DR-H1195D835-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1056120

CATALOG NUMBER: S124R3DR-H1195D835-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°	17529	17529	17529
5°	17389	17350	17337
10°	17288	16831	16621
15°	17106	16198	15703
20°	16883	15429	14564
25°	16609	14545	13236
30°	16279	13538	11885
35°	15935	12487	10582
40°	15575	11400	9361
45°	15196	10343	8227
50°	14729	9231	7103
55°	14280	8119	6454
60°	13775	6965	5986
65°	13155	6318	5586
70°	12220	5845	5279
75°	11065	5384	4984
80°	9659	4974	4679
85°	7395	4585	4291

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15196 cd/sqm



TEST NUMBER: P1056120

CATALOG NUMBER: S124R3DR-H1195D835-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.6	4.7
10°-20°	500.7	12.7
20°-30°	693.3	17.6
30°-40°	744.1	18.8
40°-50°	676.7	17.1
50°-60°	532.9	13.5
60°-70°	364.7	9.2
70°-80°	196.3	5.0
80°-90°	55.6	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°	1378.6	34.9
0°-40°	2122.6	53.8
0°-60°	3332.2	84.4
0°-90°	3948.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3948.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1983	1983	1983	1983	1983	
5°	1959	1981	1955	1945	1953	186
15°	1869	1848	1770	1722	1716	527
25°	1702	1632	1491	1383	1357	784
35°	1476	1361	1157	1017	980	924
45°	1215	1061	827	684	658	937
55°	926	750	527	424	419	828
65°	629	449	302	268	267	620
75°	324	197	158	144	146	346
85°	73	50	45	42	42	88
90°	0	0	0	0	0	

TEST NUMBER: P1056120

CATALOG NUMBER: S124R3DR-H1195D835-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1982.6	1982.6	1982.6	1982.6	1982.6
2.5°	1968.0	1991.4	1973.9	1976.8	1979.7
5°	1959.3	1981.2	1954.9	1944.7	1953.4
7.5°	1944.7	1959.3	1918.4	1899.5	1908.2
10°	1925.7	1928.6	1874.7	1846.9	1851.3
12.5°	1899.5	1892.2	1826.5	1787.1	1790.1
15°	1868.8	1848.4	1769.6	1721.5	1715.6
17.5°	1833.8	1800.3	1706.9	1645.6	1634.0
20°	1794.4	1749.2	1639.8	1561.0	1547.9
22.5°	1750.7	1692.3	1566.8	1473.5	1454.5
25°	1702.5	1632.5	1491.0	1383.0	1356.8
27.5°	1650.0	1568.3	1409.3	1291.1	1257.6
30°	1594.6	1501.2	1326.1	1199.2	1164.2
32.5°	1537.7	1432.6	1241.5	1107.3	1070.8
35°	1476.4	1361.1	1156.9	1016.8	980.4
37.5°	1413.7	1286.7	1070.8	929.3	891.4
40°	1349.5	1212.3	987.7	841.8	811.1
42.5°	1283.8	1136.5	906.0	760.1	732.4
45°	1215.3	1060.6	827.2	684.2	658.0
47.5°	1145.2	983.3	746.9	612.7	587.9
50°	1070.8	906.0	671.1	542.7	516.4
52.5°	999.3	827.2	598.1	474.1	461.0
55°	926.4	749.9	526.7	424.5	418.7
57.5°	853.4	672.5	461.0	385.1	379.3
60°	779.0	596.7	393.9	344.3	338.5
62.5°	704.6	522.3	344.3	304.9	302.0
65°	628.8	449.3	302.0	268.4	267.0
67.5°	548.5	379.3	264.1	236.3	234.9
70°	472.7	309.3	226.1	204.2	204.2
72.5°	401.2	245.1	191.1	173.6	173.6
75°	323.9	196.9	157.6	144.4	145.9
77.5°	255.3	154.6	126.9	118.2	118.2
80°	189.7	115.3	97.7	90.5	91.9
82.5°	128.4	80.2	70.0	65.6	65.6
85°	72.9	49.6	45.2	42.3	42.3
87.5°	26.3	23.3	21.9	19.0	20.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1056120  
 CATALOG NUMBER: S124R3DR-H1195D835-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	21.09	22.62	21.46	22.93	23.24	16.87	18.39	17.23	18.71	19.02
	3H	22.87	24.24	23.24	24.56	24.93	18.48	19.85	18.86	20.18	20.54
	4H	23.54	24.82	23.94	25.17	25.55	19.11	20.40	19.51	20.75	21.12
	6H	24.05	25.24	24.46	25.60	25.99	19.61	20.80	20.02	21.17	21.56
	8H	24.21	25.34	24.64	25.73	26.13	19.78	20.91	20.21	21.30	21.70
	12H	24.31	25.39	24.74	25.78	26.21	19.90	20.99	20.33	21.37	21.80
4H	2H	21.19	22.47	21.59	22.82	23.20	17.59	18.87	17.99	19.22	19.60
	3H	23.13	24.20	23.54	24.60	25.00	19.39	20.46	19.81	20.86	21.27
	4H	23.89	24.85	24.32	25.27	25.70	20.13	21.10	20.56	21.51	21.95
	6H	24.52	25.36	24.98	25.80	26.26	20.75	21.59	21.21	22.03	22.49
	8H	24.74	25.53	25.20	25.97	26.44	20.96	21.75	21.43	22.19	22.66
	12H	24.90	25.60	25.38	26.08	26.55	21.13	21.83	21.61	22.31	22.78
8H	4H	23.94	24.73	24.41	25.17	25.64	20.52	21.31	20.98	21.75	22.22
	6H	24.64	25.29	25.14	25.78	26.26	21.25	21.90	21.75	22.39	22.87
	8H	24.91	25.49	25.42	26.00	26.49	21.54	22.12	22.05	22.63	23.12
	12H	25.13	25.64	25.64	26.14	26.70	21.79	22.30	22.29	22.79	23.36
12H	4H	23.94	24.64	24.42	25.12	25.59	20.58	21.28	21.06	21.76	22.23
	6H	24.64	25.22	25.15	25.73	26.22	21.33	21.92	21.85	22.43	22.92
	8H	24.95	25.46	25.45	25.95	26.52	21.68	22.20	22.19	22.69	23.25