

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: P1056135

Luminaire Tested: S124R3DR-H1195D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056135
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-H1195D935-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, 90 CRI LEDS
Ballast/Driver: -

Summary

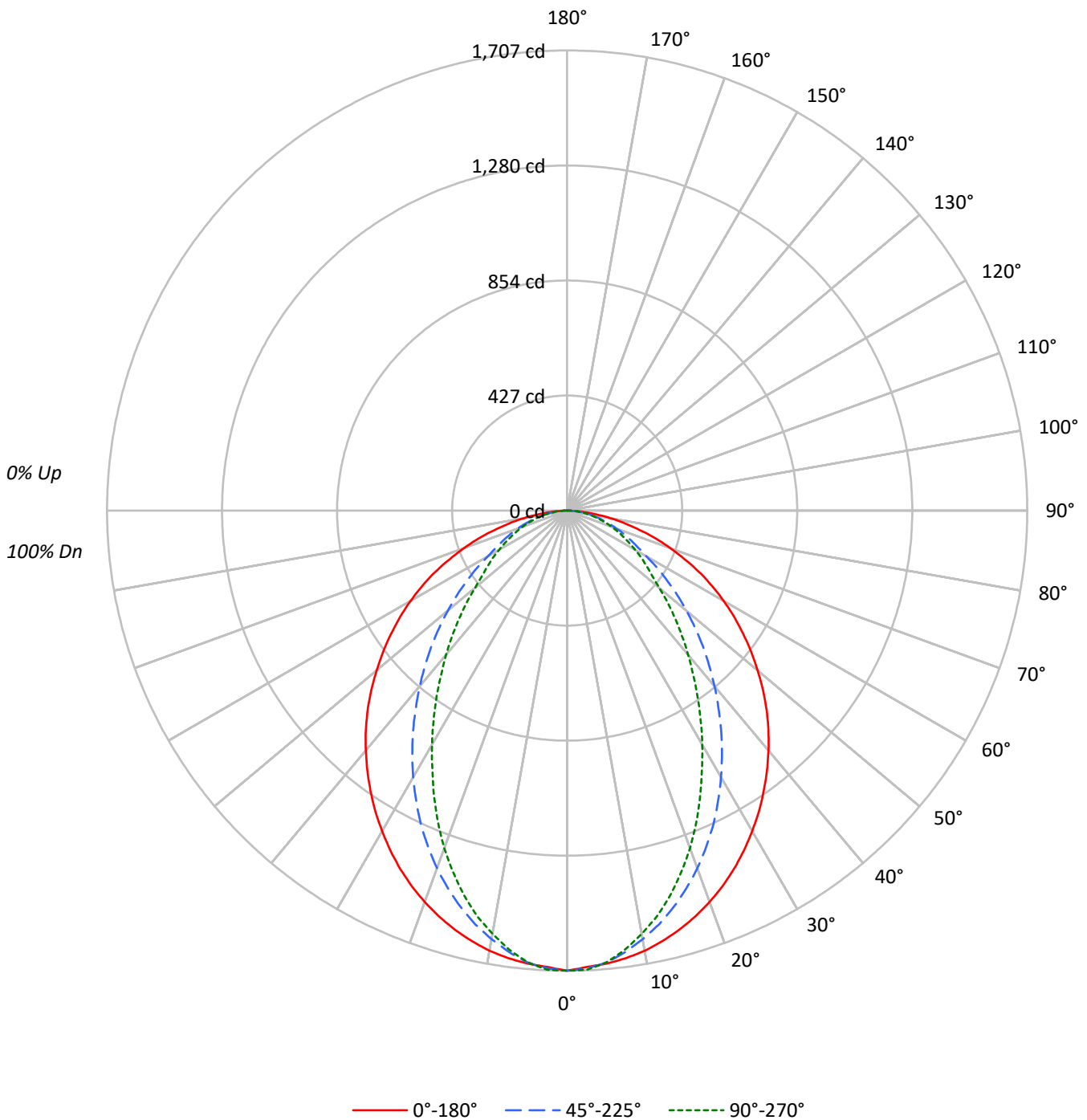
Lumens per Lamp: N/A
Luminaire Lumens: 3400.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (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: P1056135

CATALOG NUMBER: S124R3DR-H1195D935-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056135

CATALOG NUMBER: S124R3DR-H1195D935-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	15092	15092	15092
5°	14971	14939	14927
10°	14885	14491	14311
15°	14729	13946	13521
20°	14537	13284	12539
25°	14300	12523	11396
30°	14016	11657	10234
35°	13720	10751	9111
40°	13410	9815	8061
45°	13083	8905	7083
50°	12682	7947	6117
55°	12295	6990	5557
60°	11862	5996	5153
65°	11326	5439	4810
70°	10521	5033	4547
75°	9527	4636	4291
80°	8314	4287	4027
85°	6371	3946	3693

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13083 cd/sqm



TEST NUMBER: P1056135

CATALOG NUMBER: S124R3DR-H1195D935-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.9	4.7
10°-20°	431.1	12.7
20°-30°	596.9	17.6
30°-40°	640.7	18.8
40°-50°	582.6	17.1
50°-60°	458.8	13.5
60°-70°	314.0	9.2
70°-80°	169.0	5.0
80°-90°	47.8	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°	1186.9	34.9
0°-40°	1827.6	53.8
0°-60°	2869.0	84.4
0°-90°	3400.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3400.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1707	1707	1707	1707	1707	
5°	1687	1706	1683	1674	1682	160
15°	1609	1592	1524	1482	1477	454
25°	1466	1406	1284	1191	1168	675
35°	1271	1172	996	876	844	795
45°	1046	913	712	589	566	807
55°	798	646	454	366	360	713
65°	541	387	260	231	230	534
75°	279	170	136	124	126	298
85°	63	43	39	36	36	75
90°	0	0	0	0	0	



TEST NUMBER: P1056135

CATALOG NUMBER: S124R3DR-H1195D935-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1707.0	1707.0	1707.0	1707.0	1707.0
2.5°	1694.5	1714.6	1699.5	1702.0	1704.5
5°	1686.9	1705.8	1683.2	1674.4	1681.9
7.5°	1674.4	1686.9	1651.8	1635.4	1643.0
10°	1658.0	1660.6	1614.1	1590.2	1594.0
12.5°	1635.4	1629.2	1572.6	1538.7	1541.2
15°	1609.1	1591.5	1523.6	1482.2	1477.2
17.5°	1578.9	1550.0	1469.6	1416.9	1406.8
20°	1545.0	1506.1	1411.9	1344.0	1332.7
22.5°	1507.3	1457.1	1349.0	1268.7	1252.3
25°	1465.9	1405.6	1283.7	1190.8	1168.2
27.5°	1420.6	1350.3	1213.4	1111.6	1082.8
30°	1372.9	1292.5	1141.8	1032.5	1002.4
32.5°	1323.9	1233.5	1068.9	953.4	922.0
35°	1271.2	1171.9	996.1	875.5	844.1
37.5°	1217.2	1107.9	922.0	800.1	767.5
40°	1161.9	1043.8	850.4	724.8	698.4
42.5°	1105.4	978.5	780.0	654.4	630.6
45°	1046.3	913.2	712.2	589.1	566.5
47.5°	986.0	846.6	643.1	527.6	506.2
50°	922.0	780.0	577.8	467.3	444.7
52.5°	860.4	712.2	515.0	408.2	396.9
55°	797.6	645.6	453.5	365.5	360.5
57.5°	734.8	579.1	396.9	331.6	326.6
60°	670.8	513.7	339.1	296.4	291.4
62.5°	606.7	449.7	296.4	262.5	260.0
65°	541.4	386.9	260.0	231.1	229.9
67.5°	472.3	326.6	227.4	203.5	202.2
70°	407.0	266.3	194.7	175.9	175.9
72.5°	345.4	211.0	164.5	149.5	149.5
75°	278.9	169.6	135.7	124.4	125.6
77.5°	219.8	133.1	109.3	101.7	101.7
80°	163.3	99.2	84.2	77.9	79.1
82.5°	110.5	69.1	60.3	56.5	56.5
85°	62.8	42.7	38.9	36.4	36.4
87.5°	22.6	20.1	18.8	16.3	17.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056135
 CATALOG NUMBER: S124R3DR-H1195D935-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	20.57	22.10	20.94	22.41	22.72	16.35	17.87	16.71	18.19	18.50
	3H	22.35	23.72	22.72	24.04	24.41	17.96	19.33	18.34	19.66	20.02
	4H	23.02	24.30	23.42	24.65	25.03	18.59	19.88	18.99	20.23	20.61
	6H	23.53	24.72	23.94	25.08	25.47	19.09	20.28	19.50	20.65	21.04
	8H	23.69	24.82	24.12	25.21	25.61	19.26	20.39	19.69	20.78	21.18
	12H	23.79	24.87	24.22	25.26	25.69	19.38	20.47	19.81	20.85	21.28
4H	2H	20.67	21.95	21.07	22.30	22.68	17.07	18.35	17.47	18.70	19.08
	3H	22.61	23.68	23.02	24.08	24.48	18.88	19.95	19.29	20.34	20.75
	4H	23.37	24.33	23.80	24.75	25.19	19.61	20.58	20.04	20.99	21.43
	6H	24.00	24.84	24.46	25.28	25.74	20.23	21.07	20.69	21.51	21.97
	8H	24.22	25.01	24.68	25.45	25.92	20.44	21.23	20.91	21.67	22.14
	12H	24.38	25.08	24.86	25.56	26.03	20.61	21.31	21.09	21.79	22.26
8H	4H	23.43	24.21	23.89	24.65	25.12	20.00	20.79	20.46	21.23	21.70
	6H	24.12	24.77	24.62	25.26	25.74	20.73	21.38	21.23	21.87	22.35
	8H	24.39	24.97	24.91	25.48	25.97	21.02	21.60	21.53	22.11	22.60
	12H	24.61	25.12	25.12	25.62	26.18	21.27	21.78	21.77	22.27	22.84
12H	4H	23.42	24.12	23.90	24.60	25.07	20.06	20.76	20.54	21.24	21.71
	6H	24.12	24.70	24.63	25.21	25.70	20.82	21.40	21.33	21.91	22.40
	8H	24.43	24.94	24.93	25.43	26.00	21.16	21.68	21.67	22.17	22.74