

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: P1056072

Luminaire Tested: S124R3DR-S795D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056072
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-S795D850-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

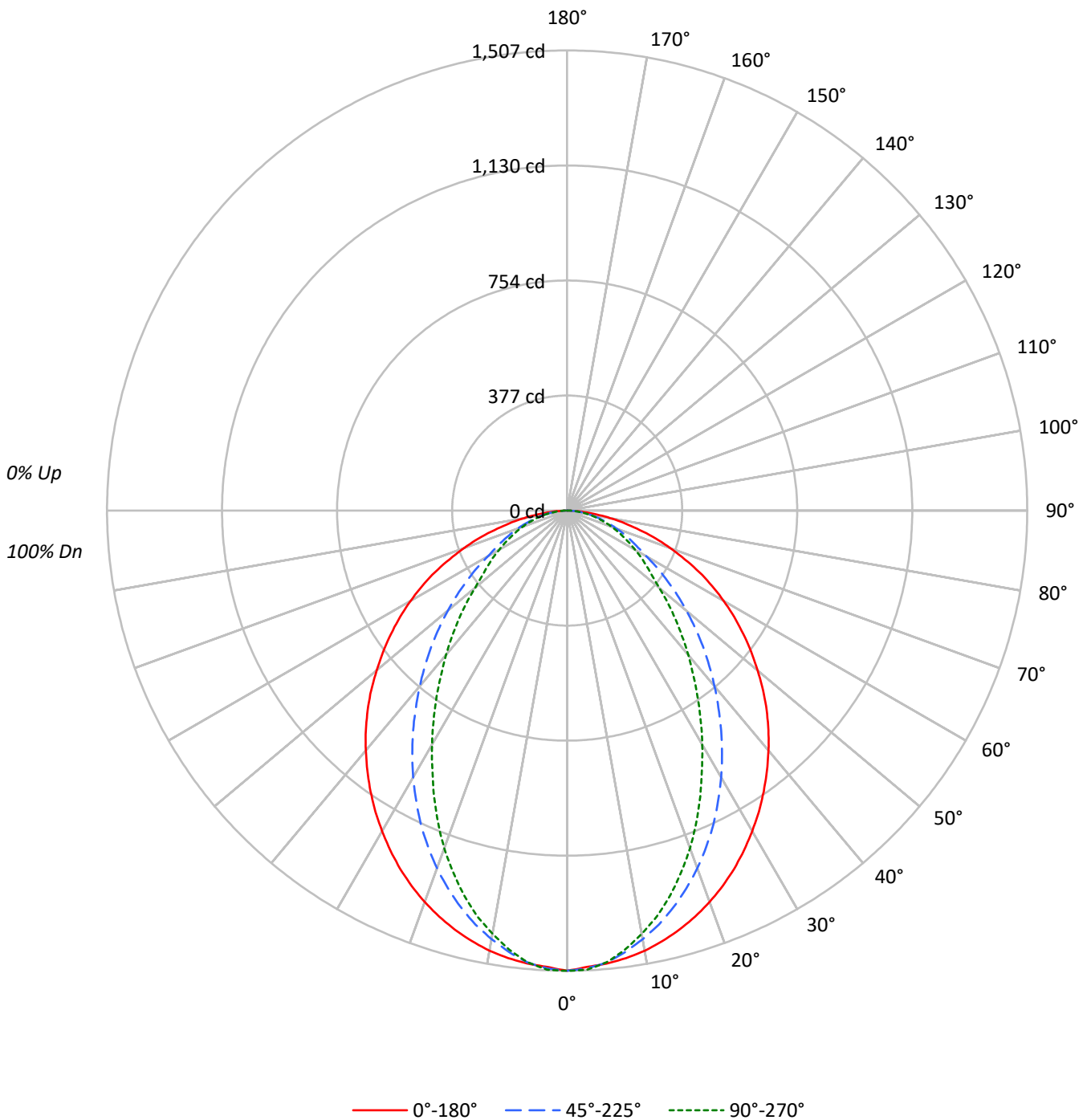
Lumens per Lamp: N/A
Luminaire Lumens: 3001.8 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): 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: P1056072

CATALOG NUMBER: S124R3DR-S795D850-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056072

CATALOG NUMBER: S124R3DR-S795D850-X4F0-XX-UDD-F-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13325	13325	13325
5°	13219	13189	13180
10°	13143	12794	12634
15°	13003	12313	11938
20°	12835	11728	11071
25°	12625	11057	10062
30°	12375	10292	9035
35°	12113	9492	8043
40°	11839	8665	7117
45°	11551	7862	6254
50°	11196	7016	5400
55°	10855	6170	4906
60°	10472	5294	4550
65°	10000	4803	4245
70°	9288	4444	4015
75°	8410	4092	3788
80°	7342	3783	3559
85°	5630	3490	3266

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11551 cd/sqm



TEST NUMBER: P1056072

CATALOG NUMBER: S124R3DR-S795D850-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.3	4.7
10°-20°	380.6	12.7
20°-30°	527.0	17.6
30°-40°	565.6	18.8
40°-50°	514.4	17.1
50°-60°	405.1	13.5
60°-70°	277.3	9.2
70°-80°	149.3	5.0
80°-90°	42.3	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°	1047.9	34.9
0°-40°	1613.6	53.8
0°-60°	2533.0	84.4
0°-90°	3001.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3001.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1507	1507	1507	1507	1507	
5°	1489	1506	1486	1478	1485	141
15°	1421	1405	1345	1309	1304	401
25°	1294	1241	1133	1051	1031	596
35°	1122	1035	879	773	745	702
45°	924	806	629	520	500	712
55°	704	570	400	323	318	630
65°	478	342	230	204	203	472
75°	246	150	120	110	111	263
85°	56	38	34	32	32	67
90°	0	0	0	0	0	



TEST NUMBER: P1056072

CATALOG NUMBER: S124R3DR-S795D850-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1507.1	1507.1	1507.1	1507.1	1507.1
2.5°	1496.0	1513.8	1500.5	1502.7	1504.9
5°	1489.4	1506.0	1486.1	1478.3	1485.0
7.5°	1478.3	1489.4	1458.3	1443.9	1450.6
10°	1463.9	1466.1	1425.1	1404.0	1407.3
12.5°	1443.9	1438.4	1388.5	1358.5	1360.7
15°	1420.6	1405.1	1345.2	1308.6	1304.2
17.5°	1394.0	1368.5	1297.5	1251.0	1242.1
20°	1364.1	1329.7	1246.5	1186.6	1176.7
22.5°	1330.8	1286.4	1191.1	1120.1	1105.7
25°	1294.2	1241.0	1133.4	1051.3	1031.4
27.5°	1254.3	1192.2	1071.3	981.5	956.0
30°	1212.1	1141.2	1008.1	911.6	885.0
32.5°	1168.9	1089.0	943.8	841.7	814.0
35°	1122.3	1034.7	879.4	773.0	745.2
37.5°	1074.6	978.1	814.0	706.4	677.6
40°	1025.8	921.6	750.8	639.9	616.6
42.5°	975.9	863.9	688.7	577.8	556.7
45°	923.8	806.2	628.8	520.1	500.2
47.5°	870.6	747.5	567.8	465.8	446.9
50°	814.0	688.7	510.1	412.5	392.6
52.5°	759.7	628.8	454.7	360.4	350.4
55°	704.2	570.0	400.3	322.7	318.3
57.5°	648.8	511.2	350.4	292.8	288.3
60°	592.2	453.6	299.4	261.7	257.3
62.5°	535.6	397.0	261.7	231.8	229.6
65°	478.0	341.6	229.6	204.1	202.9
67.5°	417.0	288.3	200.7	179.7	178.5
70°	359.3	235.1	171.9	155.3	155.3
72.5°	305.0	186.3	145.3	132.0	132.0
75°	246.2	149.7	119.8	109.8	110.9
77.5°	194.1	117.6	96.5	89.8	89.8
80°	144.2	87.6	74.3	68.8	69.9
82.5°	97.6	61.0	53.2	49.9	49.9
85°	55.5	37.7	34.4	32.2	32.2
87.5°	20.0	17.7	16.6	14.4	15.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056072
 CATALOG NUMBER: S124R3DR-S795D850-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	20.14	21.66	20.50	21.98	22.29	15.92	17.44	16.28	17.76	18.07
	3H	21.91	23.28	22.29	23.61	23.97	17.53	18.90	17.91	19.23	19.59
	4H	22.59	23.87	22.99	24.22	24.60	18.16	19.45	18.56	19.79	20.17
	6H	23.10	24.28	23.51	24.65	25.04	18.66	19.85	19.07	20.21	20.61
	8H	23.26	24.39	23.68	24.78	25.18	18.83	19.96	19.26	20.35	20.75
	12H	23.36	24.44	23.79	24.82	25.25	18.95	20.04	19.38	20.42	20.85
4H	2H	20.23	21.52	20.63	21.87	22.25	16.64	17.92	17.03	18.27	18.65
	3H	22.18	23.25	22.59	23.65	24.05	18.44	19.51	18.85	19.91	20.31
	4H	22.93	23.90	23.37	24.31	24.75	19.18	20.14	19.61	20.56	21.00
	6H	23.57	24.41	24.03	24.85	25.31	19.80	20.64	20.25	21.08	21.54
	8H	23.79	24.57	24.25	25.02	25.48	20.01	20.80	20.48	21.24	21.71
	12H	23.94	24.65	24.43	25.12	25.59	20.18	20.88	20.66	21.36	21.83
8H	4H	22.99	23.78	23.46	24.22	24.69	19.57	20.35	20.03	20.80	21.26
	6H	23.69	24.34	24.19	24.83	25.31	20.30	20.95	20.80	21.44	21.92
	8H	23.96	24.54	24.47	25.05	25.54	20.59	21.17	21.10	21.68	22.17
	12H	24.18	24.69	24.69	25.18	25.75	20.83	21.35	21.34	21.84	22.41
12H	4H	22.98	23.68	23.47	24.16	24.63	19.62	20.33	20.11	20.80	21.27
	6H	23.68	24.27	24.20	24.78	25.26	20.38	20.97	20.90	21.48	21.96
	8H	23.99	24.51	24.50	25.00	25.56	20.73	21.25	21.24	21.74	22.30