

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: P1056071

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056071
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-S795D850-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

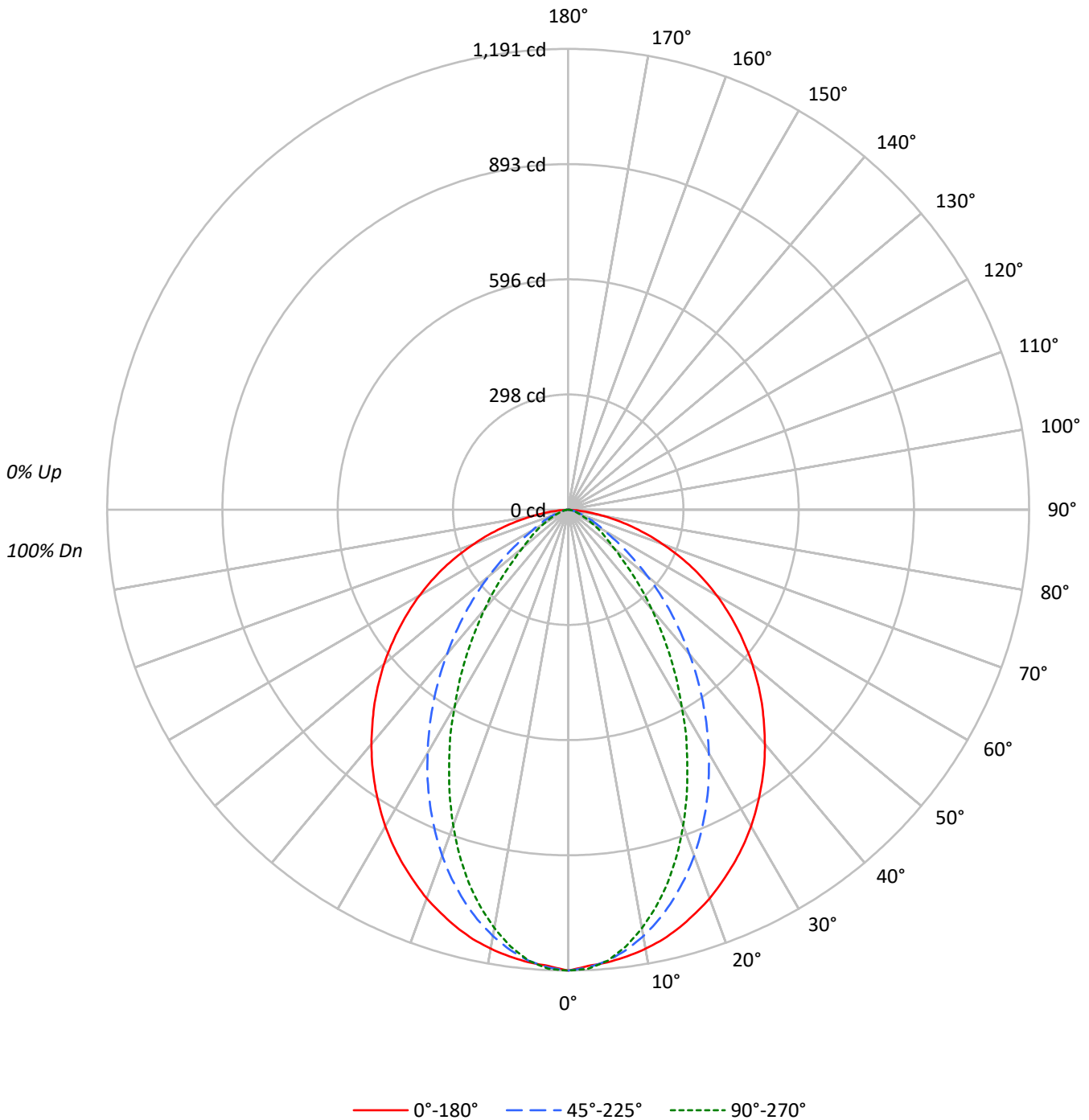
Lumens per Lamp: N/A
Luminaire Lumens: 1925.9 lumens
Efficiency: N/A
Efficacy: 73.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P1056071

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

Luminous Intensity Polar Plot





TEST NUMBER: P1056071

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

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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10531	10531	10531
5°	10423	10384	10384
10°	10345	10046	9857
15°	10222	9562	9116
20°	10059	8952	8170
25°	9856	8233	7097
30°	9647	7416	5978
35°	9397	6547	4920
40°	9126	5620	3878
45°	8846	4673	2898
50°	8542	3677	2121
55°	8205	2718	1693
60°	7844	1883	1294
65°	7379	1462	952
70°	6680	1031	744
75°	5835	721	567
80°	4684	565	509
85°	2587	446	446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8846 cd/sqm



TEST NUMBER: P1056071

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.5	5.7
10°-20°	295.2	15.3
20°-30°	393.7	20.4
30°-40°	396.4	20.6
40°-50°	325.1	16.9
50°-60°	222.2	11.5
60°-70°	124.2	6.4
70°-80°	49.2	2.6
80°-90°	9.3	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°	799.4	41.5
0°-40°	1195.8	62.1
0°-60°	1743.1	90.5
0°-90°	1925.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1925.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1191	1191	1191	1191	1191	
5°	1174	1188	1170	1164	1170	111
15°	1117	1105	1045	1008	996	315
25°	1010	960	844	759	728	465
35°	871	778	607	491	456	544
45°	708	578	374	263	232	545
55°	532	374	176	118	110	476
65°	353	177	70	50	46	348
75°	171	47	21	18	17	183
85°	26	4	4	4	4	36
90°	0	0	0	0	0	



TEST NUMBER: P1056071

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1191.1	1191.1	1191.1	1191.1	1191.1
2.5°	1180.0	1194.4	1184.4	1185.5	1187.7
5°	1174.4	1187.7	1170.0	1164.5	1170.0
7.5°	1164.5	1174.4	1147.8	1136.7	1138.9
10°	1152.3	1155.6	1119.0	1100.1	1097.9
12.5°	1136.7	1132.3	1084.6	1056.9	1050.2
15°	1116.8	1104.6	1044.7	1008.1	995.9
17.5°	1093.5	1072.4	1000.3	952.6	934.9
20°	1069.1	1038.0	951.5	890.5	868.3
22.5°	1040.2	1001.4	899.4	825.1	799.6
25°	1010.3	960.4	843.9	758.6	727.5
27.5°	979.2	918.3	786.3	690.9	659.9
30°	944.9	872.8	726.4	623.3	585.6
32.5°	908.3	826.2	666.5	556.7	521.2
35°	870.6	778.5	606.6	491.3	455.8
37.5°	831.8	729.7	546.7	429.2	393.7
40°	790.7	679.8	486.9	370.4	336.0
42.5°	748.6	628.8	429.2	315.0	282.8
45°	707.5	577.8	373.7	262.8	231.8
47.5°	664.3	526.8	319.4	214.0	187.4
50°	621.0	475.8	267.3	171.9	154.2
52.5°	576.7	424.7	219.6	140.8	128.6
55°	532.3	373.7	176.3	117.6	109.8
57.5°	488.0	322.7	136.4	99.8	90.9
60°	443.6	272.8	106.5	81.0	73.2
62.5°	398.1	222.9	87.6	64.3	57.7
65°	352.7	177.4	69.9	49.9	45.5
67.5°	307.2	135.3	53.2	38.8	35.5
70°	258.4	96.5	39.9	29.9	28.8
72.5°	216.3	65.4	28.8	23.3	22.2
75°	170.8	46.6	21.1	17.7	16.6
77.5°	132.0	29.9	15.5	14.4	13.3
80°	92.0	16.6	11.1	10.0	10.0
82.5°	56.6	8.9	7.8	6.7	6.7
85°	25.5	4.4	4.4	4.4	4.4
87.5°	4.4	2.2	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056071
 CATALOG NUMBER: S124R3DR-S795D850-X4F0-XX-UDD-F-S

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	18.90	20.31	19.27	20.62	20.94	9.99	11.40	10.36	11.71	12.03
	3H	20.49	21.74	20.87	22.07	22.43	10.58	11.84	10.96	12.16	12.53
	4H	21.08	22.25	21.49	22.60	22.98	10.74	11.91	11.14	12.26	12.64
	6H	21.52	22.59	21.93	22.96	23.35	10.85	11.92	11.26	12.29	12.69
	8H	21.63	22.65	22.06	23.04	23.44	10.87	11.89	11.30	12.28	12.68
	12H	21.67	22.65	22.10	23.03	23.46	10.88	11.85	11.31	12.23	12.66
4H	2H	18.76	19.93	19.16	20.28	20.66	10.58	11.75	10.98	12.10	12.48
	3H	20.41	21.36	20.82	21.77	22.17	11.29	12.25	11.70	12.65	13.05
	4H	21.01	21.87	21.45	22.29	22.73	11.49	12.35	11.93	12.77	13.21
	6H	21.50	22.24	21.96	22.69	23.15	11.66	12.40	12.12	12.84	13.31
	8H	21.65	22.34	22.11	22.78	23.25	11.69	12.38	12.16	12.83	13.30
	12H	21.72	22.33	22.20	22.81	23.29	11.72	12.33	12.20	12.81	13.28
8H	4H	20.90	21.60	21.37	22.04	22.51	11.76	12.45	12.23	12.90	13.37
	6H	21.39	21.95	21.89	22.45	22.93	11.97	12.53	12.47	13.03	13.51
	8H	21.53	22.04	22.05	22.55	23.04	12.03	12.53	12.54	13.05	13.54
	12H	21.62	22.07	22.13	22.56	23.13	12.08	12.53	12.60	13.03	13.60
12H	4H	20.87	21.48	21.35	21.96	22.43	11.79	12.40	12.27	12.88	13.36
	6H	21.33	21.84	21.85	22.35	22.84	12.00	12.50	12.52	13.02	13.51
	8H	21.50	21.94	22.01	22.44	23.01	12.09	12.54	12.60	13.03	13.60