

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: P1056063

Luminaire Tested: S124R3DR-S795D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056063
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-S795D830-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

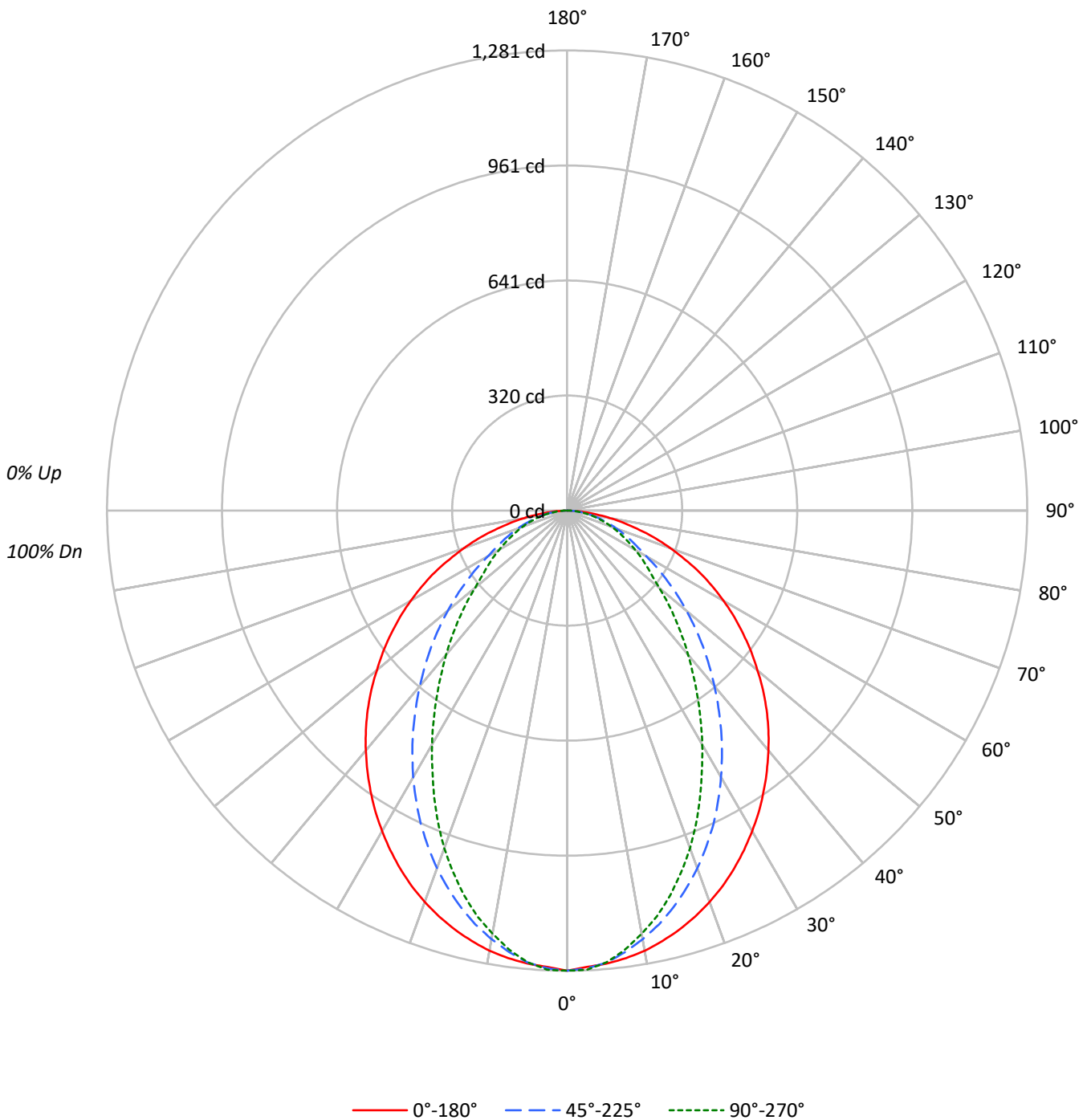
Lumens per Lamp: N/A
Luminaire Lumens: 2551.2 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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°	11325	11325	11325
5°	11234	11209	11201
10°	11170	10874	10738
15°	11052	10465	10145
20°	10908	9968	9409
25°	10730	9397	8552
30°	10517	8747	7679
35°	10296	8067	6836
40°	10063	7365	6049
45°	9817	6682	5315
50°	9516	5964	4590
55°	9226	5246	4170
60°	8900	4500	3867
65°	8498	4082	3609
70°	7895	3777	3412
75°	7146	3478	3221
80°	6237	3218	3024
85°	4778	2962	2769

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9817 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.3	4.7
10°-20°	323.5	12.7
20°-30°	447.9	17.6
30°-40°	480.7	18.8
40°-50°	437.2	17.1
50°-60°	344.3	13.5
60°-70°	235.6	9.2
70°-80°	126.8	5.0
80°-90°	35.9	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°	890.6	34.9
0°-40°	1371.4	53.8
0°-60°	2152.9	84.4
0°-90°	2551.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2551.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1266	1280	1263	1256	1262	120
15°	1207	1194	1143	1112	1108	340
25°	1100	1055	963	894	877	506
35°	954	879	747	657	633	597
45°	785	685	534	442	425	605
55°	598	484	340	274	270	535
65°	406	290	195	173	172	401
75°	209	127	102	93	94	223
85°	47	32	29	27	27	57
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1280.9	1280.9	1280.9	1280.9	1280.9
2.5°	1271.5	1286.6	1275.3	1277.1	1279.0
5°	1265.8	1280.0	1263.0	1256.4	1262.1
7.5°	1256.4	1265.8	1239.4	1227.2	1232.8
10°	1244.2	1246.0	1211.2	1193.3	1196.1
12.5°	1227.2	1222.5	1180.1	1154.6	1156.5
15°	1207.4	1194.2	1143.3	1112.2	1108.4
17.5°	1184.8	1163.1	1102.8	1063.2	1055.6
20°	1159.3	1130.1	1059.4	1008.5	1000.0
22.5°	1131.1	1093.4	1012.3	952.0	939.7
25°	1099.9	1054.7	963.3	893.5	876.6
27.5°	1066.0	1013.2	910.5	834.2	812.5
30°	1030.2	969.9	856.8	774.8	752.2
32.5°	993.4	925.6	802.1	715.4	691.8
35°	953.9	879.4	747.4	657.0	633.4
37.5°	913.3	831.3	691.8	600.4	575.9
40°	871.9	783.3	638.1	543.8	524.1
42.5°	829.4	734.2	585.3	491.1	473.2
45°	785.1	685.2	534.4	442.1	425.1
47.5°	739.9	635.3	482.6	395.9	379.8
50°	691.8	585.3	433.6	350.6	333.7
52.5°	645.6	534.4	386.4	306.3	297.8
55°	598.5	484.5	340.3	274.3	270.5
57.5°	551.4	434.5	297.8	248.8	245.1
60°	503.3	385.5	254.5	222.4	218.7
62.5°	455.2	337.4	222.4	197.0	195.1
65°	406.2	290.3	195.1	173.4	172.5
67.5°	354.4	245.1	170.6	152.7	151.7
70°	305.4	199.8	146.1	132.0	132.0
72.5°	259.2	158.3	123.5	112.2	112.2
75°	209.2	127.2	101.8	93.3	94.3
77.5°	164.9	99.9	82.0	76.3	76.3
80°	122.5	74.5	63.2	58.4	59.4
82.5°	82.9	51.8	45.2	42.4	42.4
85°	47.1	32.0	29.2	27.3	27.3
87.5°	17.0	15.1	14.1	12.3	13.2
90°	0.0	0.0	0.0	0.0	0.0

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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	19.57	21.10	19.94	21.41	21.73	15.35	16.88	15.72	17.19	17.50
	3H	21.35	22.72	21.73	23.05	23.41	16.96	18.33	17.34	18.66	19.02
	4H	22.02	23.31	22.42	23.66	24.03	17.59	18.88	17.99	19.23	19.61
	6H	22.53	23.72	22.94	24.08	24.48	18.09	19.28	18.51	19.65	20.04
	8H	22.69	23.82	23.12	24.21	24.62	18.26	19.40	18.69	19.79	20.19
	12H	22.79	23.88	23.22	24.26	24.69	18.39	19.47	18.82	19.85	20.28
4H	2H	19.67	20.95	20.07	21.30	21.68	16.07	17.36	16.47	17.70	18.08
	3H	21.61	22.68	22.02	23.08	23.48	17.88	18.95	18.29	19.35	19.75
	4H	22.37	23.33	22.80	23.75	24.19	18.61	19.58	19.05	19.99	20.43
	6H	23.00	23.84	23.46	24.29	24.75	19.23	20.07	19.69	20.51	20.97
	8H	23.22	24.01	23.69	24.45	24.92	19.45	20.23	19.91	20.67	21.14
	12H	23.38	24.08	23.86	24.56	25.03	19.61	20.31	20.10	20.79	21.26
8H	4H	22.43	23.21	22.89	23.66	24.12	19.00	19.79	19.47	20.23	20.70
	6H	23.13	23.77	23.62	24.27	24.74	19.73	20.38	20.23	20.87	21.35
	8H	23.39	23.98	23.91	24.49	24.97	20.02	20.61	20.54	21.11	21.60
	12H	23.61	24.13	24.12	24.62	25.18	20.27	20.78	20.78	21.27	21.84
12H	4H	22.42	23.12	22.90	23.60	24.07	19.06	19.76	19.54	20.24	20.71
	6H	23.12	23.70	23.63	24.21	24.70	19.82	20.40	20.33	20.91	21.40
	8H	23.43	23.94	23.94	24.43	25.00	20.17	20.68	20.68	21.17	21.74