

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: P1055980

Luminaire Tested: S124R3DR-S1195D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055980
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S1195D830-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

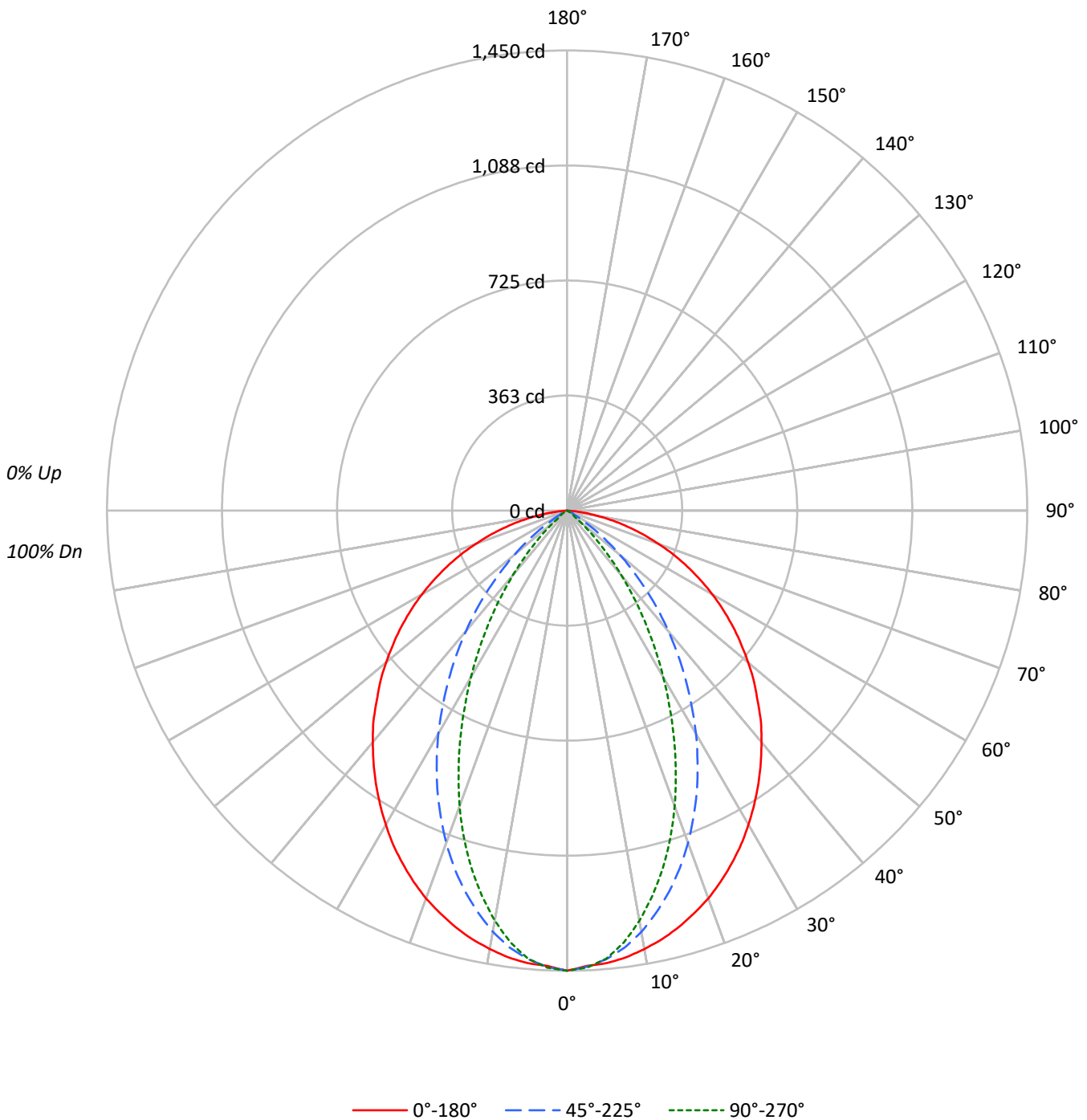
Lumens per Lamp: N/A
Luminaire Lumens: 2026.5 lumens
Efficiency: N/A
Efficacy: 48.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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	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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90																												
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80																												
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71																												
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64																												
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57																												
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52																												
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47																												
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43																												
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40																												
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12819	12819	12819
5°	12704	12591	12578
10°	12596	12098	11779
15°	12439	11372	10669
20°	12238	10486	9322
25°	11968	9443	7780
30°	11668	8287	6183
35°	11338	7026	4602
40°	10992	5726	3068
45°	10611	4373	1688
50°	10246	2992	469
55°	9839	1622	307
60°	9351	502	177
65°	8743	326	90
70°	7900	147	36
75°	6798	48	0
80°	5137	0	0
85°	2161	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10611 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.8	6.6
10°-20°	351.2	17.3
20°-30°	453.8	22.4
30°-40°	433.7	21.4
40°-50°	324.3	16.0
50°-60°	193.0	9.5
60°-70°	98.0	4.8
70°-80°	34.1	1.7
80°-90°	4.7	0.2
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°	938.7	46.3
0°-40°	1372.4	67.7
0°-60°	1889.8	93.3
0°-90°	2026.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2026.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1450	1450	1450	1450	1450	
5°	1431	1443	1419	1412	1417	136
15°	1359	1330	1242	1184	1166	383
25°	1227	1142	968	840	798	565
35°	1050	906	651	485	426	657
45°	849	651	350	186	135	656
55°	638	397	105	24	20	570
65°	418	161	16	6	4	413
75°	199	21	1	1	0	211
85°	21	0	0	0	0	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1449.9	1449.9	1449.9	1449.9	1449.9
2.5°	1435.7	1452.8	1438.6	1440.0	1441.4
5°	1431.4	1442.8	1418.7	1411.5	1417.2
7.5°	1420.1	1424.3	1388.8	1370.3	1371.7
10°	1403.0	1398.8	1347.6	1316.3	1312.0
12.5°	1383.1	1368.9	1297.8	1252.3	1242.4
15°	1359.0	1330.5	1242.4	1184.1	1165.6
17.5°	1330.5	1289.3	1181.3	1104.5	1081.8
20°	1300.7	1243.8	1114.5	1019.2	990.8
22.5°	1265.1	1192.6	1042.0	929.7	894.1
25°	1226.8	1141.5	968.0	840.1	797.5
27.5°	1187.0	1086.0	889.9	749.1	699.4
30°	1142.9	1027.7	811.7	656.7	605.6
32.5°	1097.4	968.0	730.6	571.4	514.6
35°	1050.5	905.5	651.0	484.7	426.4
37.5°	1002.2	842.9	574.3	402.3	342.6
40°	952.4	779.0	496.1	324.1	265.8
42.5°	904.1	715.0	422.2	250.2	196.2
45°	848.6	651.0	349.7	186.2	135.0
47.5°	798.9	588.5	280.0	126.5	79.6
50°	744.9	521.7	217.5	73.9	34.1
52.5°	690.8	459.1	159.2	32.7	25.6
55°	638.3	396.6	105.2	24.2	19.9
57.5°	582.8	334.1	56.9	18.5	14.2
60°	528.8	272.9	28.4	14.2	10.0
62.5°	473.4	214.6	22.7	8.5	5.7
65°	417.9	160.6	15.6	5.7	4.3
67.5°	362.5	109.5	10.0	2.8	1.4
70°	305.6	66.8	5.7	1.4	1.4
72.5°	251.6	34.1	2.8	1.4	1.4
75°	199.0	21.3	1.4	1.4	0.0
77.5°	147.8	11.4	1.4	1.4	0.0
80°	100.9	4.3	0.0	0.0	0.0
82.5°	58.3	1.4	0.0	0.0	0.0
85°	21.3	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	19.32	20.65	19.68	20.96	21.28	0.00	0.00	0.00	0.00	0.00
	3H	20.86	22.04	21.24	22.37	22.73	0.00	0.00	0.00	0.00	0.00
	4H	21.45	22.55	21.86	22.90	23.28	0.00	0.00	0.00	0.00	0.00
	6H	21.87	22.88	22.29	23.25	23.64	0.00	0.00	0.00	0.00	0.00
	8H	21.97	22.92	22.40	23.31	23.72	0.00	0.00	0.00	0.00	0.00
	12H	21.99	22.90	22.42	23.28	23.71	0.00	0.00	0.00	0.00	0.00
4H	2H	19.10	20.19	19.50	20.54	20.93	0.00	0.06	0.00	0.41	0.80
	3H	20.66	21.55	21.07	21.96	22.36	0.00	0.00	0.00	0.23	0.63
	4H	21.24	22.04	21.68	22.46	22.90	0.00	0.00	0.00	0.09	0.53
	6H	21.70	22.39	22.17	22.84	23.30	0.00	0.00	0.00	0.00	0.41
	8H	21.82	22.46	22.29	22.91	23.38	0.00	0.00	0.00	0.00	0.31
	12H	21.86	22.43	22.35	22.91	23.39	0.00	0.00	0.00	0.00	0.23
8H	4H	21.11	21.75	21.58	22.19	22.67	0.61	1.25	1.08	1.70	2.17
	6H	21.55	22.07	22.05	22.57	23.05	0.52	1.04	1.02	1.54	2.02
	8H	21.66	22.13	22.19	22.65	23.14	0.46	0.92	0.98	1.44	1.93
	12H	21.71	22.13	22.23	22.62	23.19	0.41	0.83	0.93	1.32	1.89
12H	4H	21.06	21.63	21.55	22.11	22.58	1.02	1.59	1.51	2.07	2.55
	6H	21.49	21.95	22.01	22.47	22.96	0.91	1.38	1.44	1.90	2.39
	8H	21.62	22.03	22.14	22.53	23.10	0.87	1.28	1.39	1.78	2.35