

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: P1055981

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055981
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-S1195D830-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

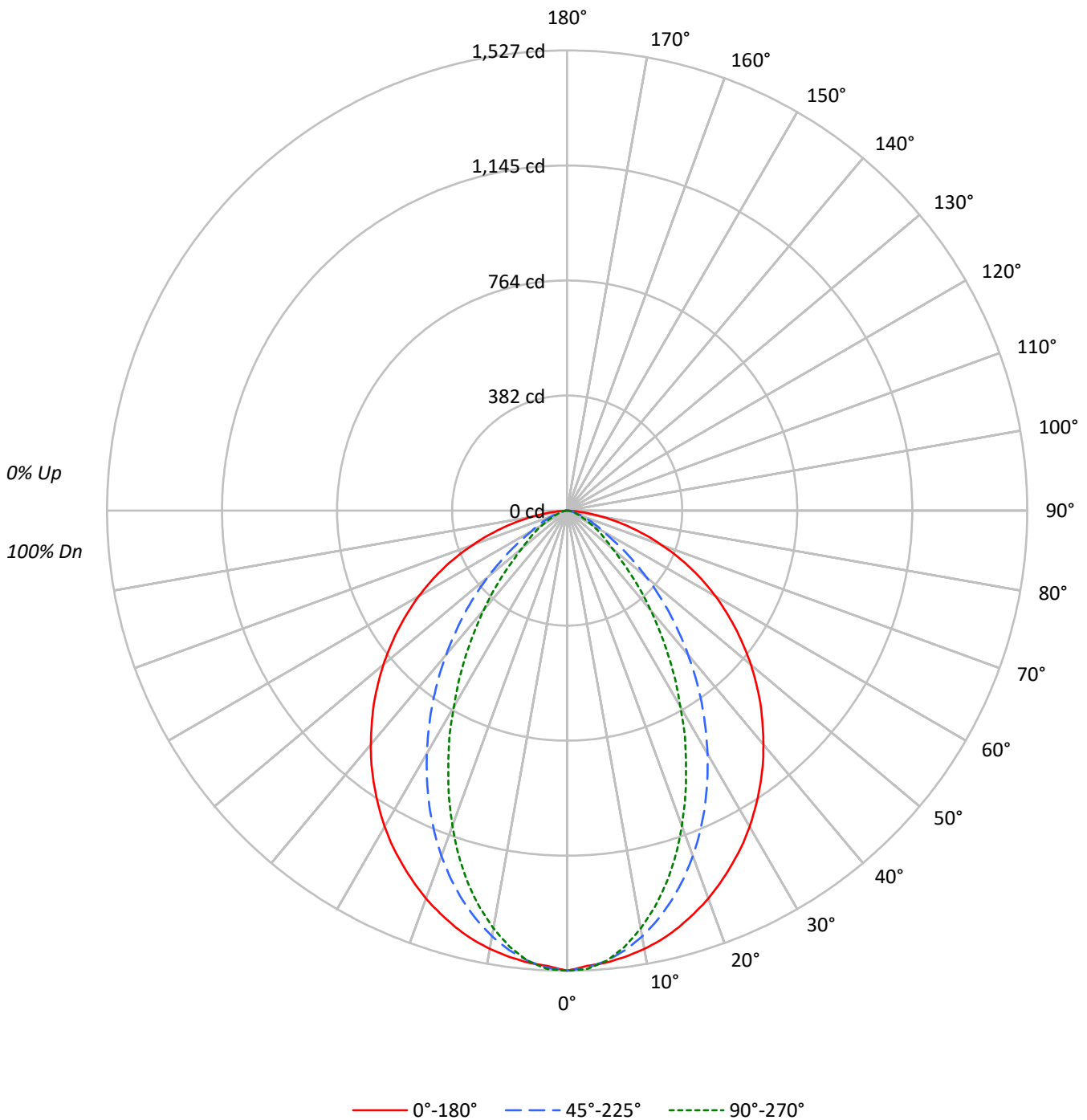
Lumens per Lamp: N/A
Luminaire Lumens: 2468.6 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	13498	13498	13498
5°	13361	13310	13310
10°	13259	12877	12634
15°	13102	12257	11684
20°	12893	11475	10472
25°	12633	10553	9097
30°	12364	9506	7663
35°	12044	8393	6305
40°	11697	7202	4971
45°	11340	5989	3715
50°	10949	4712	2718
55°	10517	3484	2169
60°	10054	2414	1659
65°	9456	1874	1220
70°	8562	1324	956
75°	7478	922	728
80°	6008	723	652
85°	3317	578	578

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11340 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.6	5.7
10°-20°	378.4	15.3
20°-30°	504.7	20.4
30°-40°	508.1	20.6
40°-50°	416.7	16.9
50°-60°	284.8	11.5
60°-70°	159.2	6.4
70°-80°	63.1	2.6
80°-90°	12.0	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°	1024.6	41.5
0°-40°	1532.8	62.1
0°-60°	2234.3	90.5
0°-90°	2468.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2468.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1505	1522	1500	1493	1500	143
15°	1431	1416	1339	1292	1276	403
25°	1295	1231	1082	972	932	597
35°	1116	998	778	630	584	698
45°	907	741	479	337	297	699
55°	682	479	226	151	141	610
65°	452	227	90	64	58	447
75°	219	60	27	23	21	235
85°	33	6	6	6	6	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1526.7	1526.7	1526.7	1526.7	1526.7
2.5°	1512.5	1531.0	1518.2	1519.6	1522.4
5°	1505.4	1522.4	1499.7	1492.6	1499.7
7.5°	1492.6	1505.4	1471.3	1457.0	1459.9
10°	1476.9	1481.2	1434.3	1410.1	1407.3
12.5°	1457.0	1451.3	1390.2	1354.7	1346.2
15°	1431.4	1415.8	1339.1	1292.1	1276.5
17.5°	1401.6	1374.6	1282.2	1221.1	1198.3
20°	1370.3	1330.5	1219.6	1141.5	1113.0
22.5°	1333.4	1283.6	1152.8	1057.6	1024.9
25°	1295.0	1231.0	1081.8	972.3	932.5
27.5°	1255.2	1177.0	1007.8	885.6	845.8
30°	1211.1	1118.7	931.1	798.9	750.6
32.5°	1164.2	1059.0	854.3	713.6	668.1
35°	1115.9	997.9	777.6	629.7	584.2
37.5°	1066.1	935.3	700.8	550.1	504.6
40°	1013.5	871.4	624.0	474.8	430.7
42.5°	959.5	806.0	550.1	403.7	362.5
45°	906.9	740.6	479.0	336.9	297.1
47.5°	851.5	675.2	409.4	274.3	240.2
50°	796.0	609.8	342.6	220.3	197.6
52.5°	739.2	544.4	281.5	180.5	164.9
55°	682.3	479.0	226.0	150.7	140.7
57.5°	625.5	413.7	174.8	127.9	116.6
60°	568.6	349.7	136.5	103.8	93.8
62.5°	510.3	285.7	112.3	82.4	73.9
65°	452.0	227.4	89.6	64.0	58.3
67.5°	393.8	173.4	68.2	49.8	45.5
70°	331.2	123.7	51.2	38.4	37.0
72.5°	277.2	83.9	37.0	29.9	28.4
75°	218.9	59.7	27.0	22.7	21.3
77.5°	169.2	38.4	19.9	18.5	17.1
80°	118.0	21.3	14.2	12.8	12.8
82.5°	72.5	11.4	10.0	8.5	8.5
85°	32.7	5.7	5.7	5.7	5.7
87.5°	5.7	2.8	2.8	2.8	2.8
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	19.77	21.17	20.13	21.49	21.80	10.86	12.26	11.22	12.57	12.89
	3H	21.35	22.60	21.73	22.93	23.30	11.45	12.70	11.83	13.03	13.39
	4H	21.95	23.12	22.35	23.47	23.85	11.60	12.77	12.01	13.12	13.50
	6H	22.38	23.45	22.79	23.82	24.22	11.71	12.79	12.13	13.16	13.55
	8H	22.49	23.51	22.92	23.90	24.31	11.73	12.75	12.16	13.14	13.55
	12H	22.54	23.51	22.97	23.89	24.32	11.74	12.72	12.17	13.10	13.53
4H	2H	19.62	20.79	20.02	21.14	21.52	11.44	12.61	11.84	12.96	13.34
	3H	21.27	22.23	21.68	22.63	23.03	12.15	13.11	12.56	13.51	13.92
	4H	21.87	22.73	22.31	23.15	23.59	12.36	13.21	12.79	13.63	14.07
	6H	22.37	23.11	22.83	23.55	24.02	12.52	13.26	12.98	13.71	14.17
	8H	22.51	23.20	22.98	23.65	24.12	12.56	13.25	13.02	13.69	14.16
	12H	22.58	23.20	23.07	23.68	24.15	12.58	13.19	13.07	13.68	14.15
8H	4H	21.77	22.46	22.23	22.91	23.37	12.63	13.32	13.09	13.77	14.23
	6H	22.25	22.82	22.75	23.31	23.79	12.83	13.40	13.33	13.89	14.37
	8H	22.39	22.90	22.91	23.41	23.91	12.89	13.40	13.41	13.91	14.40
	12H	22.48	22.93	23.00	23.43	24.00	12.95	13.40	13.46	13.89	14.46
12H	4H	21.73	22.34	22.21	22.82	23.30	12.65	13.27	13.14	13.75	14.22
	6H	22.19	22.70	22.71	23.22	23.71	12.86	13.37	13.38	13.88	14.37
	8H	22.36	22.81	22.87	23.30	23.87	12.95	13.40	13.47	13.90	14.46