

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: P1055994

Luminaire Tested: S124R3DR-S1195D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055994
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-S1195D927-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

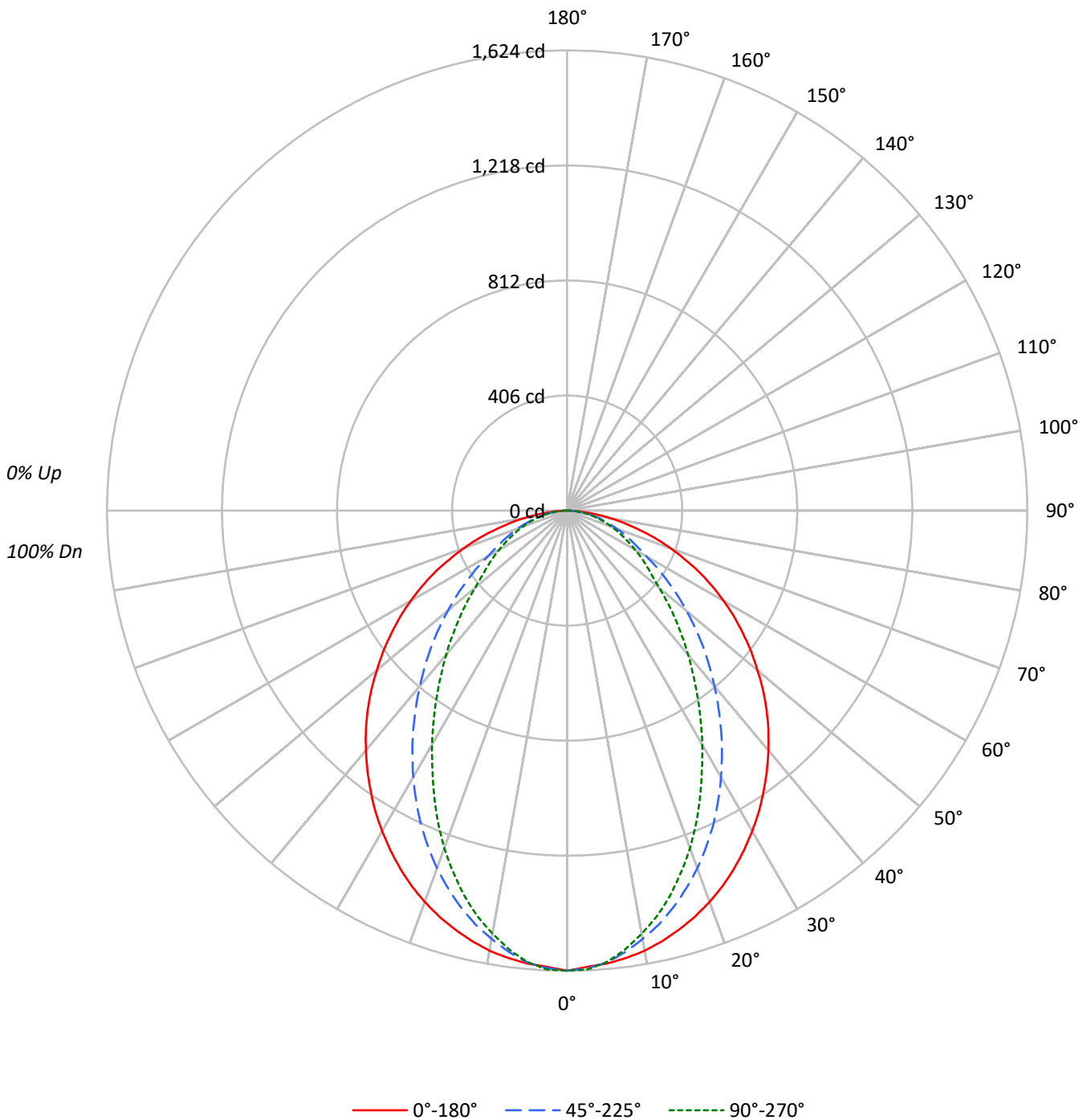
Lumens per Lamp: N/A
Luminaire Lumens: 3233.9 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (Ain): 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					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°	14355	14355	14355
5°	14240	14208	14198
10°	14158	13783	13611
15°	14009	13265	12860
20°	13826	12635	11927
25°	13602	11911	10839
30°	13331	11087	9733
35°	13050	10226	8666
40°	12755	9335	7667
45°	12444	8470	6737
50°	12062	7560	5817
55°	11695	6648	5286
60°	11282	5704	4902
65°	10772	5174	4573
70°	10007	4788	4325
75°	9059	4407	4082
80°	7907	4073	3834
85°	6056	3753	3510

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12444 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.2	4.7
10°-20°	410.0	12.7
20°-30°	567.7	17.6
30°-40°	609.4	18.8
40°-50°	554.2	17.1
50°-60°	436.4	13.5
60°-70°	298.7	9.2
70°-80°	160.8	5.0
80°-90°	45.5	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°	1128.9	34.9
0°-40°	1738.3	53.8
0°-60°	2728.9	84.4
0°-90°	3233.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3233.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1624	1624	1624	1624	1624	
5°	1604	1622	1601	1593	1600	152
15°	1530	1514	1449	1410	1405	432
25°	1394	1337	1221	1133	1111	642
35°	1209	1115	947	833	803	756
45°	995	869	677	560	539	767
55°	759	614	431	348	343	678
65°	515	368	247	220	219	508
75°	265	161	129	118	120	283
85°	60	41	37	35	35	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1623.6	1623.6	1623.6	1623.6	1623.6
2.5°	1611.7	1630.8	1616.5	1618.9	1621.3
5°	1604.5	1622.4	1600.9	1592.6	1599.7
7.5°	1592.6	1604.5	1571.1	1555.5	1562.7
10°	1577.0	1579.4	1535.2	1512.5	1516.1
12.5°	1555.5	1549.6	1495.8	1463.5	1465.9
15°	1530.5	1513.7	1449.2	1409.8	1405.0
17.5°	1501.8	1474.3	1397.8	1347.7	1338.1
20°	1469.5	1432.5	1342.9	1278.4	1267.6
22.5°	1433.7	1385.9	1283.1	1206.7	1191.1
25°	1394.3	1336.9	1221.0	1132.6	1111.1
27.5°	1351.2	1284.3	1154.1	1057.3	1029.9
30°	1305.8	1229.4	1086.0	982.1	953.4
32.5°	1259.2	1173.2	1016.7	906.8	876.9
35°	1209.1	1114.7	947.4	832.7	802.9
37.5°	1157.7	1053.8	876.9	761.0	730.0
40°	1105.1	992.8	808.8	689.4	664.3
42.5°	1051.4	930.7	741.9	622.5	599.8
45°	995.2	868.6	677.4	560.3	538.8
47.5°	937.9	805.2	611.7	501.8	481.5
50°	876.9	741.9	549.6	444.4	422.9
52.5°	818.4	677.4	489.8	388.3	377.5
55°	758.7	614.1	431.3	347.7	342.9
57.5°	698.9	550.8	377.5	315.4	310.6
60°	638.0	488.6	322.6	282.0	277.2
62.5°	577.1	427.7	282.0	249.7	247.3
65°	514.9	368.0	247.3	219.8	218.6
67.5°	449.2	310.6	216.2	193.5	192.4
70°	387.1	253.3	185.2	167.3	167.3
72.5°	328.6	200.7	156.5	142.2	142.2
75°	265.2	161.3	129.0	118.3	119.5
77.5°	209.1	126.6	103.9	96.8	96.8
80°	155.3	94.4	80.0	74.1	75.3
82.5°	105.1	65.7	57.3	53.8	53.8
85°	59.7	40.6	37.0	34.6	34.6
87.5°	21.5	19.1	17.9	15.5	16.7
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	20.40	21.92	20.76	22.24	22.55	16.18	17.70	16.54	18.01	18.33
	3H	22.17	23.54	22.55	23.87	24.23	17.79	19.16	18.16	19.48	19.85
	4H	22.84	24.13	23.24	24.48	24.86	18.42	19.70	18.82	20.05	20.43
	6H	23.35	24.54	23.77	24.91	25.30	18.92	20.11	19.33	20.47	20.86
	8H	23.52	24.65	23.94	25.04	25.44	19.09	20.22	19.51	20.61	21.01
	12H	23.62	24.70	24.05	25.08	25.51	19.21	20.29	19.64	20.68	21.11
4H	2H	20.49	21.78	20.89	22.13	22.51	16.89	18.18	17.29	18.53	18.91
	3H	22.44	23.51	22.85	23.91	24.31	18.70	19.77	19.11	20.17	20.57
	4H	23.19	24.16	23.63	24.57	25.01	19.44	20.40	19.87	20.82	21.26
	6H	23.83	24.67	24.29	25.11	25.57	20.06	20.89	20.51	21.34	21.80
	8H	24.05	24.83	24.51	25.28	25.74	20.27	21.06	20.73	21.50	21.97
	12H	24.20	24.90	24.68	25.38	25.85	20.44	21.14	20.92	21.62	22.09
8H	4H	23.25	24.04	23.71	24.48	24.95	19.83	20.61	20.29	21.06	21.52
	6H	23.95	24.60	24.45	25.09	25.57	20.56	21.21	21.06	21.70	22.18
	8H	24.22	24.80	24.73	25.31	25.80	20.85	21.43	21.36	21.94	22.43
	12H	24.44	24.95	24.94	25.44	26.01	21.09	21.61	21.60	22.10	22.66
12H	4H	23.24	23.94	23.72	24.42	24.89	19.88	20.58	20.36	21.06	21.53
	6H	23.94	24.53	24.46	25.04	25.52	20.64	21.23	21.15	21.73	22.22
	8H	24.25	24.77	24.76	25.26	25.82	20.99	21.51	21.50	22.00	22.56