

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: P1056004

Luminaire Tested: S124R3DR-S1195D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056004
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-S1195D950-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

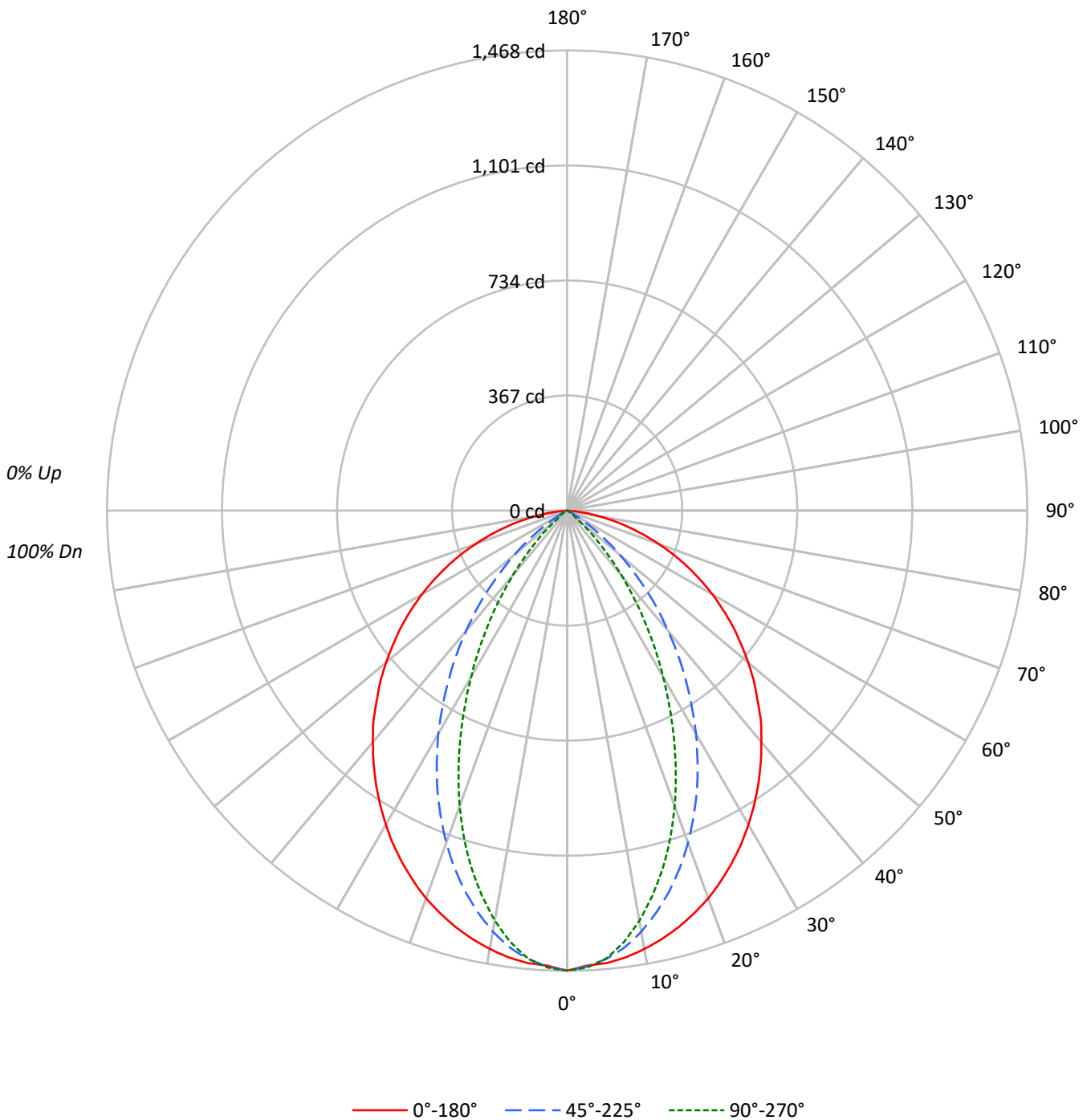
Lumens per Lamp: N/A
Luminaire Lumens: 2051.1 lumens
Efficiency: N/A
Efficacy: 49.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	12976	12976	12976
5°	12858	12744	12731
10°	12749	12246	11922
15°	12590	11510	10799
20°	12387	10613	9435
25°	12113	9558	7875
30°	11810	8387	6257
35°	11477	7113	4658
40°	11126	5795	3106
45°	10741	4425	1709
50°	10370	3027	475
55°	9958	1642	310
60°	9464	509	179
65°	8849	331	90
70°	7996	150	36
75°	6880	48	0
80°	5204	0	0
85°	2191	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10741 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.4	6.6
10°-20°	355.4	17.3
20°-30°	459.3	22.4
30°-40°	439.0	21.4
40°-50°	328.3	16.0
50°-60°	195.4	9.5
60°-70°	99.2	4.8
70°-80°	34.5	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°	950.1	46.3
0°-40°	1389.1	67.7
0°-60°	1912.7	93.3
0°-90°	2051.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2051.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1468	1468	1468	1468	1468	
5°	1449	1460	1436	1429	1434	137
15°	1376	1347	1258	1198	1180	388
25°	1242	1155	980	850	807	572
35°	1063	916	659	491	432	665
45°	859	659	354	188	137	664
55°	646	401	106	24	20	577
65°	423	163	16	6	4	418
75°	201	22	1	1	0	214
85°	22	0	0	0	0	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1467.6	1467.6	1467.6	1467.6	1467.6
2.5°	1453.2	1470.4	1456.0	1457.5	1458.9
5°	1448.8	1460.4	1435.9	1428.7	1434.5
7.5°	1437.3	1441.7	1405.7	1387.0	1388.4
10°	1420.1	1415.8	1364.0	1332.3	1328.0
12.5°	1399.9	1385.5	1313.6	1267.6	1257.5
15°	1375.5	1346.7	1257.5	1198.5	1179.8
17.5°	1346.7	1305.0	1195.6	1117.9	1094.9
20°	1316.5	1258.9	1128.0	1031.6	1002.8
22.5°	1280.5	1207.1	1054.6	941.0	905.0
25°	1241.7	1155.3	979.8	850.3	807.2
27.5°	1201.4	1099.2	900.7	758.2	707.9
30°	1156.8	1040.2	821.5	664.7	612.9
32.5°	1110.7	979.8	739.5	578.4	520.8
35°	1063.3	916.5	659.0	490.6	431.6
37.5°	1014.3	853.2	581.3	407.2	346.7
40°	964.0	788.5	502.1	328.0	269.1
42.5°	915.1	723.7	427.3	253.2	198.6
45°	859.0	659.0	353.9	188.5	136.7
47.5°	808.6	595.7	283.4	128.1	80.6
50°	753.9	528.0	220.1	74.8	34.5
52.5°	699.2	464.7	161.1	33.1	25.9
55°	646.0	401.4	106.5	24.5	20.1
57.5°	589.9	338.1	57.6	18.7	14.4
60°	535.2	276.2	28.8	14.4	10.1
62.5°	479.1	217.3	23.0	8.6	5.8
65°	423.0	162.6	15.8	5.8	4.3
67.5°	366.9	110.8	10.1	2.9	1.4
70°	309.3	67.6	5.8	1.4	1.4
72.5°	254.7	34.5	2.9	1.4	1.4
75°	201.4	21.6	1.4	1.4	0.0
77.5°	149.6	11.5	1.4	1.4	0.0
80°	102.2	4.3	0.0	0.0	0.0
82.5°	59.0	1.4	0.0	0.0	0.0
85°	21.6	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	19.36	20.69	19.72	21.00	21.32	0.00	0.00	0.00	0.00	0.00
	3H	20.90	22.08	21.28	22.41	22.77	0.00	0.00	0.00	0.00	0.00
	4H	21.50	22.59	21.90	22.94	23.33	0.00	0.00	0.00	0.00	0.00
	6H	21.91	22.92	22.33	23.29	23.68	0.00	0.00	0.00	0.00	0.00
	8H	22.01	22.96	22.44	23.36	23.76	0.00	0.00	0.00	0.00	0.00
	12H	22.03	22.94	22.46	23.32	23.75	0.00	0.00	0.00	0.00	0.00
4H	2H	19.14	20.23	19.54	20.58	20.97	0.00	0.10	0.00	0.45	0.84
	3H	20.70	21.59	21.11	22.00	22.40	0.00	0.00	0.00	0.27	0.67
	4H	21.28	22.08	21.72	22.50	22.94	0.00	0.00	0.00	0.13	0.57
	6H	21.74	22.43	22.21	22.88	23.34	0.00	0.00	0.00	0.00	0.45
	8H	21.86	22.51	22.33	22.95	23.42	0.00	0.00	0.00	0.00	0.35
	12H	21.90	22.47	22.39	22.95	23.43	0.00	0.00	0.00	0.00	0.27
8H	4H	21.15	21.79	21.62	22.24	22.71	0.65	1.29	1.12	1.74	2.21
	6H	21.59	22.11	22.09	22.61	23.09	0.56	1.08	1.06	1.58	2.06
	8H	21.71	22.17	22.23	22.69	23.18	0.50	0.97	1.02	1.48	1.97
	12H	21.75	22.17	22.27	22.66	23.23	0.45	0.87	0.97	1.36	1.93
12H	4H	21.10	21.67	21.59	22.15	22.63	1.06	1.63	1.55	2.11	2.59
	6H	21.53	22.00	22.05	22.51	23.00	0.95	1.42	1.48	1.94	2.43
	8H	21.66	22.07	22.18	22.57	23.14	0.91	1.32	1.43	1.82	2.39