

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: P1056138

Luminaire Tested: S124R3DR-H1195D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056138
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-H1195D940-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

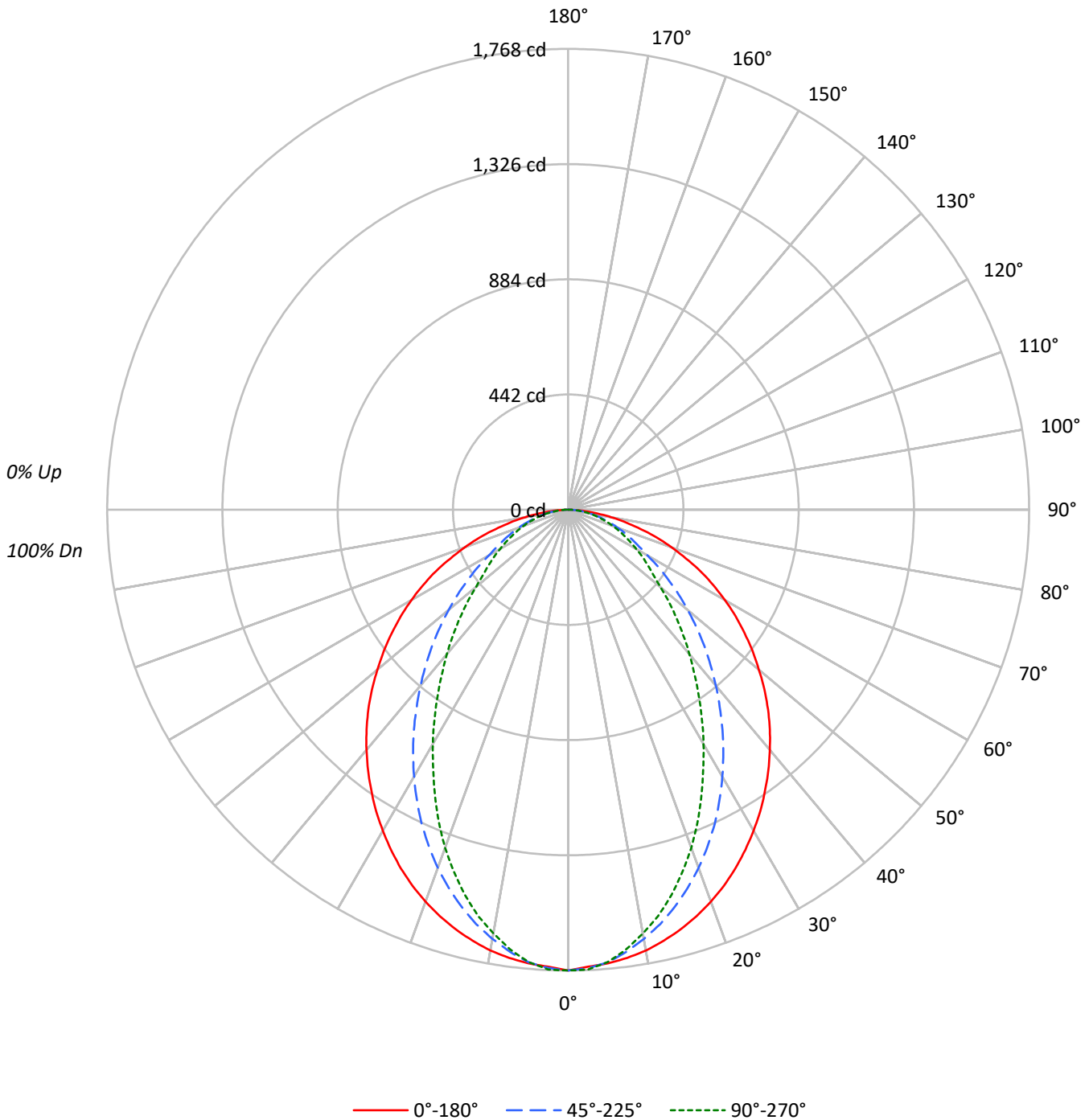
Lumens per Lamp: N/A
Luminaire Lumens: 3521.3 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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	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°	15631	15631	15631
5°	15506	15471	15460
10°	15417	15008	14821
15°	15254	14444	14004
20°	15055	13758	12987
25°	14811	12970	11802
30°	14516	12072	10598
35°	14209	11134	9436
40°	13888	10165	8348
45°	13550	9223	7336
50°	13134	8231	6334
55°	12734	7239	5756
60°	12284	6210	5337
65°	11730	5634	4981
70°	10896	5211	4707
75°	9866	4800	4444
80°	8610	4440	4175
85°	6594	4088	3824

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13550 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.6	4.7
10°-20°	446.5	12.7
20°-30°	618.2	17.6
30°-40°	663.5	18.8
40°-50°	603.4	17.1
50°-60°	475.2	13.5
60°-70°	325.2	9.2
70°-80°	175.1	5.0
80°-90°	49.6	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°	1229.3	34.9
0°-40°	1892.8	53.8
0°-60°	2971.4	84.4
0°-90°	3521.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3521.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1768	1768	1768	1768	1768	
5°	1747	1767	1743	1734	1742	166
15°	1666	1648	1578	1535	1530	470
25°	1518	1456	1330	1233	1210	699
35°	1316	1214	1032	907	874	824
45°	1084	946	738	610	587	835
55°	826	669	470	379	373	739
65°	561	401	269	239	238	553
75°	289	176	140	129	130	308
85°	65	44	40	38	38	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1767.9	1767.9	1767.9	1767.9	1767.9
2.5°	1754.9	1775.7	1760.1	1762.7	1765.3
5°	1747.1	1766.6	1743.2	1734.1	1741.9
7.5°	1734.1	1747.1	1710.7	1693.8	1701.6
10°	1717.2	1719.8	1671.7	1646.9	1650.8
12.5°	1693.8	1687.3	1628.7	1593.6	1596.2
15°	1666.5	1648.2	1578.0	1535.1	1529.9
17.5°	1635.2	1605.3	1522.1	1467.4	1457.0
20°	1600.1	1559.8	1462.2	1392.0	1380.3
22.5°	1561.1	1509.0	1397.2	1313.9	1297.0
25°	1518.2	1455.7	1329.5	1233.3	1209.8
27.5°	1471.3	1398.5	1256.7	1151.3	1121.4
30°	1421.9	1338.6	1182.5	1069.3	1038.1
32.5°	1371.2	1277.5	1107.1	987.4	954.9
35°	1316.5	1213.7	1031.6	906.7	874.2
37.5°	1260.6	1147.4	954.9	828.7	794.9
40°	1203.3	1081.1	880.7	750.6	723.3
42.5°	1144.8	1013.4	807.9	677.8	653.1
45°	1083.7	945.8	737.6	610.1	586.7
47.5°	1021.2	876.8	666.1	546.4	524.3
50°	954.9	807.9	598.4	483.9	460.5
52.5°	891.1	737.6	533.4	422.8	411.1
55°	826.1	668.7	469.6	378.6	373.4
57.5°	761.0	599.7	411.1	343.4	338.2
60°	694.7	532.1	351.2	307.0	301.8
62.5°	628.3	465.7	307.0	271.9	269.3
65°	560.7	400.7	269.3	239.4	238.1
67.5°	489.1	338.2	235.5	210.7	209.4
70°	421.5	275.8	201.6	182.1	182.1
72.5°	357.7	218.6	170.4	154.8	154.8
75°	288.8	175.6	140.5	128.8	130.1
77.5°	227.7	137.9	113.2	105.4	105.4
80°	169.1	102.8	87.2	80.7	82.0
82.5°	114.5	71.5	62.4	58.5	58.5
85°	65.0	44.2	40.3	37.7	37.7
87.5°	23.4	20.8	19.5	16.9	18.2
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	20.69	22.22	21.06	22.53	22.85	16.47	18.00	16.84	18.31	18.62
	3H	22.47	23.84	22.85	24.17	24.53	18.08	19.45	18.46	19.78	20.14
	4H	23.14	24.43	23.54	24.77	25.15	18.71	20.00	19.11	20.35	20.73
	6H	23.65	24.84	24.06	25.20	25.60	19.21	20.40	19.62	20.77	21.16
	8H	23.81	24.94	24.24	25.33	25.74	19.38	20.52	19.81	20.91	21.31
	12H	23.91	25.00	24.34	25.38	25.81	19.50	20.59	19.94	20.97	21.40
4H	2H	20.79	22.07	21.19	22.42	22.80	17.19	18.47	17.59	18.82	19.20
	3H	22.73	23.80	23.14	24.20	24.60	19.00	20.07	19.41	20.47	20.87
	4H	23.49	24.45	23.92	24.87	25.31	19.73	20.70	20.17	21.11	21.55
	6H	24.12	24.96	24.58	25.41	25.87	20.35	21.19	20.81	21.63	22.09
	8H	24.34	25.13	24.81	25.57	26.04	20.57	21.35	21.03	21.79	22.26
	12H	24.50	25.20	24.98	25.68	26.15	20.73	21.43	21.22	21.91	22.38
8H	4H	23.55	24.33	24.01	24.78	25.24	20.12	20.91	20.59	21.35	21.82
	6H	24.25	24.89	24.74	25.39	25.86	20.85	21.50	21.35	21.99	22.47
	8H	24.51	25.10	25.03	25.61	26.09	21.14	21.73	21.66	22.23	22.72
	12H	24.73	25.25	25.24	25.74	26.30	21.39	21.90	21.90	22.39	22.96
12H	4H	23.54	24.24	24.02	24.72	25.19	20.18	20.88	20.66	21.36	21.83
	6H	24.24	24.82	24.75	25.33	25.82	20.94	21.52	21.45	22.03	22.52
	8H	24.55	25.06	25.06	25.55	26.12	21.29	21.80	21.80	22.29	22.86