

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: P1056003

Luminaire Tested: S124R3DR-S1195D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056003
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-S1195D940-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

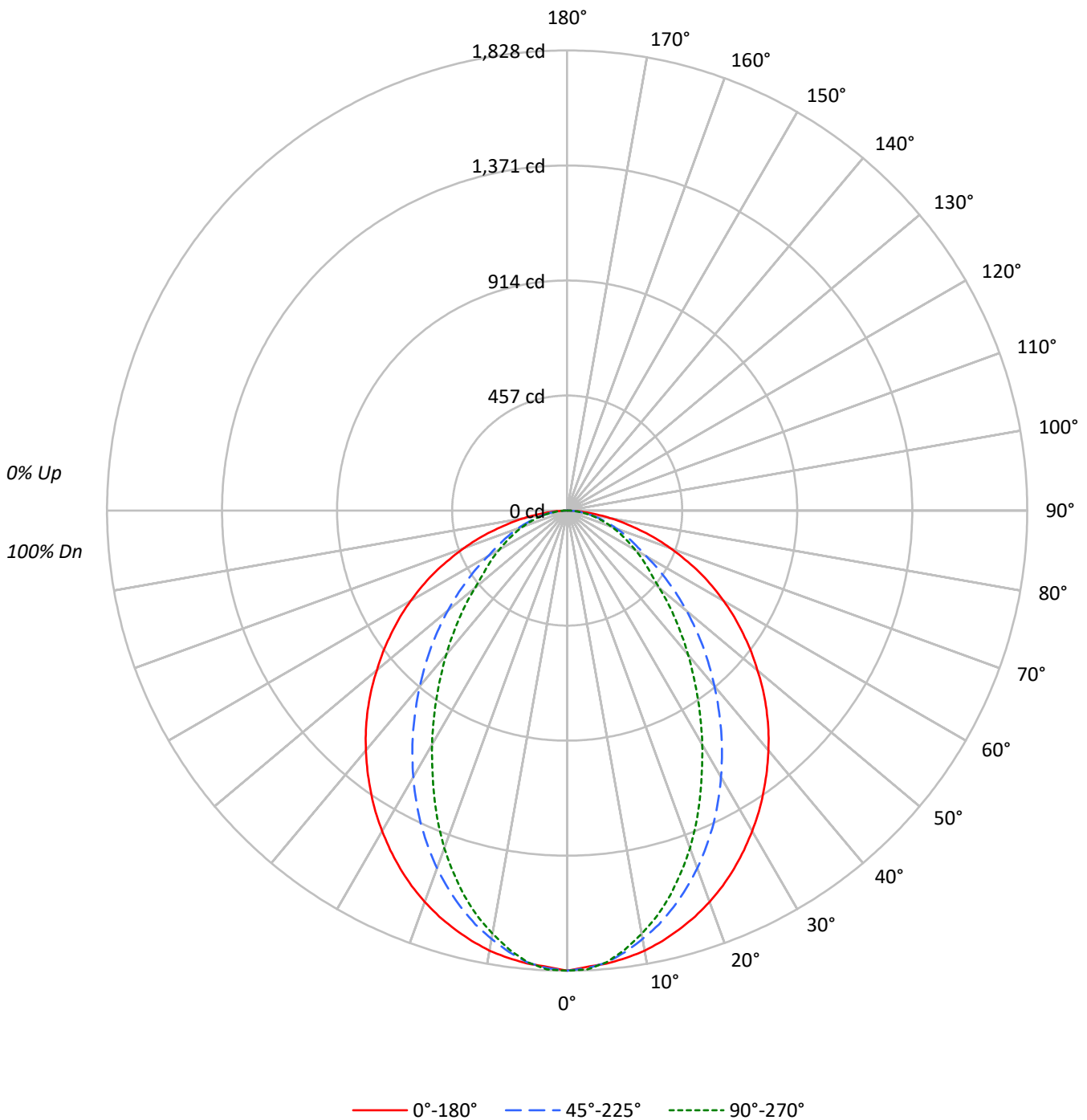
Lumens per Lamp: N/A
Luminaire Lumens: 3640.2 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P1056003

CATALOG NUMBER: S124R3DR-S1195D940-X4F0-XX-UDD-F-W

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	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°	16159	16159	16159
5°	16029	15994	15981
10°	15937	15514	15321
15°	15768	14932	14476
20°	15564	14222	13425
25°	15310	13408	12201
30°	15006	12481	10956
35°	14690	11511	9754
40°	14358	10509	8630
45°	14008	9534	7583
50°	13577	8509	6549
55°	13164	7484	5950
60°	12698	6421	5517
65°	12126	5824	5149
70°	11263	5387	4868
75°	10200	4960	4595
80°	8900	4587	4313
85°	6817	4230	3956

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14008 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.2	4.7
10°-20°	461.6	12.7
20°-30°	639.1	17.6
30°-40°	685.9	18.8
40°-50°	623.8	17.1
50°-60°	491.2	13.5
60°-70°	336.2	9.2
70°-80°	181.0	5.0
80°-90°	51.2	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°	1270.8	34.9
0°-40°	1956.7	53.8
0°-60°	3071.7	84.4
0°-90°	3640.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3640.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1828	1828	1828	1828	1828	
5°	1806	1826	1802	1793	1801	171
15°	1723	1704	1631	1587	1582	486
25°	1569	1505	1374	1275	1251	723
35°	1361	1255	1066	937	904	851
45°	1120	978	762	631	606	864
55°	854	691	486	391	386	764
65°	580	414	278	248	246	572
75°	299	182	145	133	134	319
85°	67	46	42	39	39	81
90°	0	0	0	0	0	

TEST NUMBER: P1056003

CATALOG NUMBER: S124R3DR-S1195D940-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1827.6	1827.6	1827.6	1827.6	1827.6
2.5°	1814.2	1835.7	1819.6	1822.3	1824.9
5°	1806.1	1826.3	1802.1	1792.7	1800.7
7.5°	1792.7	1806.1	1768.5	1751.0	1759.0
10°	1775.2	1777.9	1728.1	1702.6	1706.6
12.5°	1751.0	1744.3	1683.7	1647.4	1650.1
15°	1722.7	1703.9	1631.3	1586.9	1581.5
17.5°	1690.5	1659.5	1573.5	1517.0	1506.2
20°	1654.2	1612.5	1511.6	1439.0	1426.9
22.5°	1613.8	1560.0	1444.4	1358.3	1340.8
25°	1569.4	1504.9	1374.4	1274.9	1250.7
27.5°	1521.0	1445.7	1299.1	1190.2	1159.3
30°	1469.9	1383.8	1222.5	1105.5	1073.2
32.5°	1417.5	1320.6	1144.5	1020.7	987.1
35°	1361.0	1254.7	1066.5	937.4	903.7
37.5°	1303.1	1186.1	987.1	856.7	821.7
40°	1244.0	1117.6	910.5	776.0	747.7
42.5°	1183.5	1047.6	835.1	700.7	675.1
45°	1120.3	977.7	762.5	630.7	606.5
47.5°	1055.7	906.4	688.6	564.8	542.0
50°	987.1	835.1	618.6	500.3	476.1
52.5°	921.2	762.5	551.4	437.1	425.0
55°	854.0	691.2	485.5	391.3	386.0
57.5°	786.7	620.0	425.0	355.0	349.7
60°	718.1	550.0	363.1	317.4	312.0
62.5°	649.6	481.5	317.4	281.1	278.4
65°	579.6	414.2	278.4	247.5	246.1
67.5°	505.7	349.7	243.4	217.9	216.5
70°	435.7	285.1	208.4	188.3	188.3
72.5°	369.8	225.9	176.2	160.0	160.0
75°	298.6	181.6	145.2	133.1	134.5
77.5°	235.3	142.6	117.0	108.9	108.9
80°	174.8	106.2	90.1	83.4	84.7
82.5°	118.3	74.0	64.6	60.5	60.5
85°	67.2	45.7	41.7	39.0	39.0
87.5°	24.2	21.5	20.2	17.5	18.8
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1056003

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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	20.81	22.33	21.17	22.65	22.96	16.59	18.11	16.95	18.42	18.74
	3H	22.58	23.95	22.96	24.28	24.64	18.20	19.57	18.58	19.90	20.26
	4H	23.26	24.54	23.66	24.89	25.27	18.83	20.11	19.23	20.46	20.84
	6H	23.77	24.95	24.18	25.32	25.71	19.33	20.52	19.74	20.88	21.27
	8H	23.93	25.06	24.35	25.45	25.85	19.50	20.63	19.92	21.02	21.42
	12H	24.03	25.11	24.46	25.49	25.92	19.62	20.70	20.05	21.09	21.52
4H	2H	20.90	22.19	21.30	22.54	22.92	17.30	18.59	17.70	18.94	19.32
	3H	22.85	23.92	23.26	24.32	24.72	19.11	20.18	19.52	20.58	20.98
	4H	23.60	24.57	24.04	24.98	25.42	19.85	20.81	20.28	21.23	21.67
	6H	24.24	25.08	24.70	25.52	25.98	20.47	21.30	20.92	21.75	22.21
	8H	24.46	25.24	24.92	25.69	26.15	20.68	21.47	21.14	21.91	22.38
	12H	24.61	25.32	25.10	25.79	26.26	20.85	21.55	21.33	22.03	22.50
8H	4H	23.66	24.45	24.13	24.89	25.36	20.24	21.02	20.70	21.47	21.93
	6H	24.36	25.01	24.86	25.50	25.98	20.97	21.62	21.47	22.11	22.59
	8H	24.63	25.21	25.14	25.72	26.21	21.26	21.84	21.77	22.35	22.84
	12H	24.85	25.36	25.36	25.85	26.42	21.50	22.02	22.01	22.51	23.07
12H	4H	23.65	24.36	24.14	24.83	25.30	20.29	20.99	20.78	21.47	21.94
	6H	24.35	24.94	24.87	25.45	25.93	21.05	21.64	21.57	22.14	22.63
	8H	24.66	25.18	25.17	25.67	26.23	21.40	21.92	21.91	22.41	22.97