

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: P1055991

Luminaire Tested: S124R3DR-S1195D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055991
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-S1195D850-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

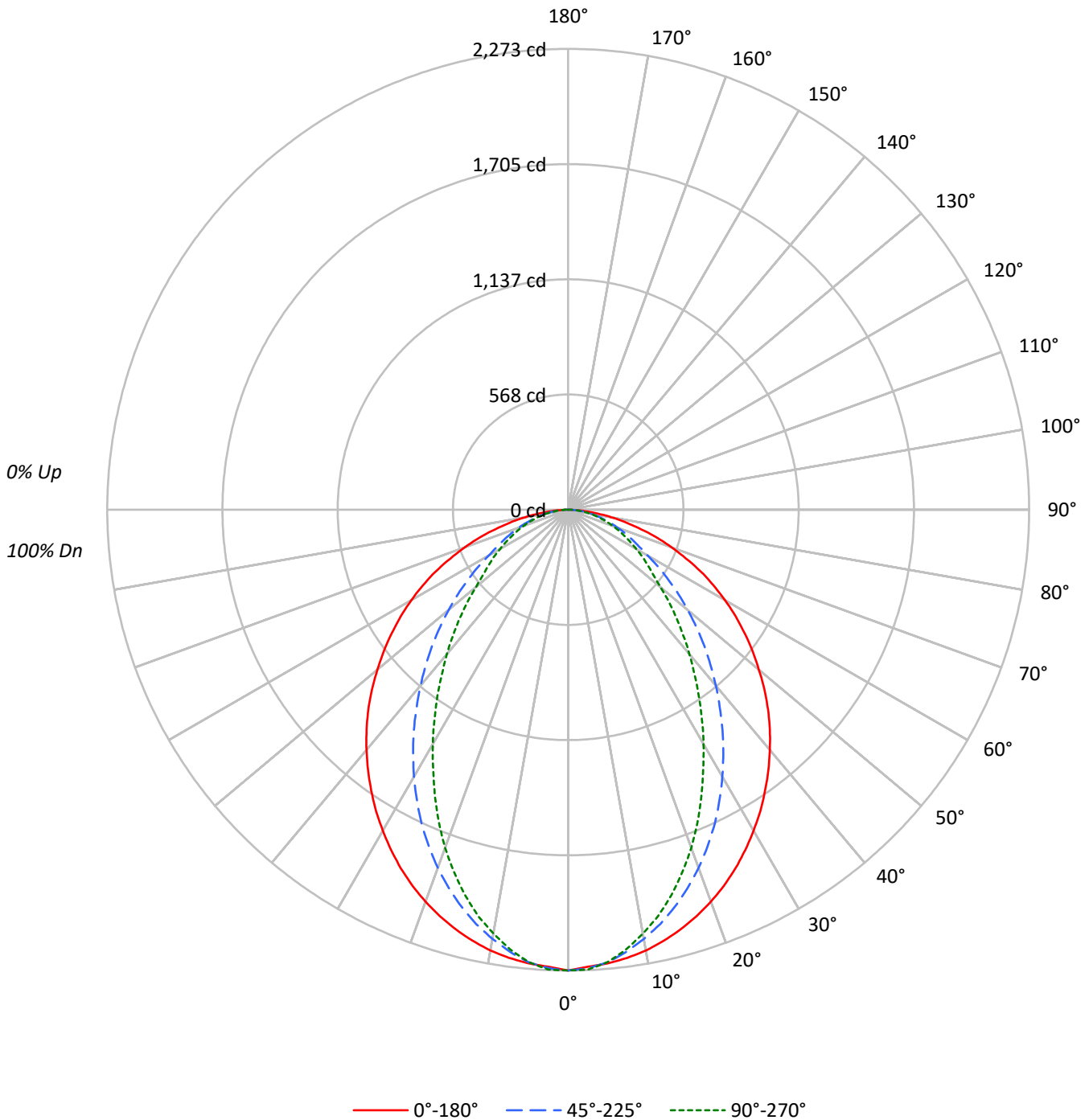
Lumens per Lamp: N/A
Luminaire Lumens: 4527.2 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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												100																
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86												86																
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73												73																
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63												63																
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55												55																
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49												49																
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43												43																
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39												39																
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35												35																
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32												32																
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29												29																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20096	20096	20096
5°	19935	19891	19876
10°	19821	19295	19055
15°	19611	18570	18004
20°	19356	17688	16697
25°	19042	16675	15174
30°	18663	15521	13626
35°	18269	14315	12132
40°	17856	13069	10733
45°	17420	11857	9431
50°	16885	10583	8144
55°	16372	9307	7399
60°	15792	7986	6861
65°	15082	7243	6404
70°	14008	6700	6054
75°	12684	6169	5715
80°	11069	5708	5366
85°	8481	5255	4920

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17420 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.6	4.7
10°-20°	574.0	12.7
20°-30°	794.8	17.6
30°-40°	853.1	18.8
40°-50°	775.8	17.1
50°-60°	610.9	13.5
60°-70°	418.1	9.2
70°-80°	225.1	5.0
80°-90°	63.7	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°	1580.4	34.9
0°-40°	2433.5	53.8
0°-60°	3820.2	84.4
0°-90°	4527.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4527.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2273	2273	2273	2273	2273	
5°	2246	2271	2241	2230	2240	213
15°	2142	2119	2029	1974	1967	604
25°	1952	1872	1709	1586	1556	899
35°	1693	1560	1326	1166	1124	1059
45°	1393	1216	948	784	754	1074
55°	1062	860	604	487	480	950
65°	721	515	346	308	306	711
75°	371	226	181	166	167	396
85°	84	57	52	48	48	101
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2273.0	2273.0	2273.0	2273.0	2273.0
2.5°	2256.3	2283.0	2263.0	2266.3	2269.6
5°	2246.2	2271.3	2241.2	2229.5	2239.5
7.5°	2229.5	2246.2	2199.4	2177.7	2187.7
10°	2207.8	2211.1	2149.2	2117.4	2122.5
12.5°	2177.7	2169.3	2094.0	2048.9	2052.2
15°	2142.5	2119.1	2028.8	1973.6	1966.9
17.5°	2102.4	2063.9	1956.9	1886.6	1873.3
20°	2057.2	2005.4	1879.9	1789.6	1774.6
22.5°	2007.1	1940.2	1796.3	1689.3	1667.5
25°	1951.9	1871.6	1709.3	1585.6	1555.5
27.5°	1891.6	1798.0	1615.7	1480.2	1441.7
30°	1828.1	1721.0	1520.3	1374.8	1334.7
32.5°	1762.9	1642.4	1423.3	1269.5	1227.6
35°	1692.6	1560.5	1326.3	1165.8	1124.0
37.5°	1620.7	1475.2	1227.6	1065.4	1021.9
40°	1547.1	1389.9	1132.3	965.1	929.9
42.5°	1471.8	1302.9	1038.7	871.4	839.6
45°	1393.2	1215.9	948.3	784.4	754.3
47.5°	1312.9	1127.3	856.3	702.5	674.0
50°	1227.6	1038.7	769.4	622.2	592.1
52.5°	1145.7	948.3	685.7	543.6	528.5
55°	1062.1	859.7	603.8	486.7	480.0
57.5°	978.4	771.0	528.5	441.6	434.9
60°	893.1	684.1	451.6	394.7	388.0
62.5°	807.8	598.8	394.7	349.6	346.2
65°	720.9	515.1	346.2	307.7	306.1
67.5°	628.9	434.9	302.7	271.0	269.3
70°	541.9	354.6	259.2	234.2	234.2
72.5°	459.9	281.0	219.1	199.0	199.0
75°	371.3	225.8	180.6	165.6	167.3
77.5°	292.7	177.3	145.5	135.5	135.5
80°	217.4	132.1	112.1	103.7	105.4
82.5°	147.2	92.0	80.3	75.3	75.3
85°	83.6	56.9	51.8	48.5	48.5
87.5°	30.1	26.8	25.1	21.7	23.4
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	21.57	23.09	21.93	23.40	23.72	17.34	18.87	17.71	19.18	19.50
	3H	23.34	24.71	23.72	25.04	25.40	18.96	20.33	19.33	20.65	21.02
	4H	24.01	25.30	24.41	25.65	26.03	19.59	20.87	19.99	21.22	21.60
	6H	24.52	25.71	24.93	26.08	26.47	20.09	21.28	20.50	21.64	22.03
	8H	24.69	25.82	25.11	26.21	26.61	20.26	21.39	20.68	21.78	22.18
	12H	24.79	25.87	25.22	26.25	26.68	20.38	21.46	20.81	21.85	22.27
4H	2H	21.66	22.95	22.06	23.30	23.67	18.06	19.35	18.46	19.70	20.08
	3H	23.61	24.68	24.02	25.08	25.48	19.87	20.94	20.28	21.34	21.74
	4H	24.36	25.33	24.79	25.74	26.18	20.61	21.57	21.04	21.99	22.43
	6H	25.00	25.84	25.45	26.28	26.74	21.22	22.06	21.68	22.51	22.97
	8H	25.22	26.00	25.68	26.45	26.91	21.44	22.22	21.90	22.67	23.14
	12H	25.37	26.07	25.85	26.55	27.02	21.61	22.31	22.09	22.79	23.26
8H	4H	24.42	25.20	24.88	25.65	26.12	21.00	21.78	21.46	22.22	22.69
	6H	25.12	25.77	25.61	26.26	26.74	21.73	22.38	22.22	22.87	23.35
	8H	25.39	25.97	25.90	26.48	26.97	22.02	22.60	22.53	23.11	23.60
	12H	25.60	26.12	26.11	26.61	27.18	22.26	22.78	22.77	23.27	23.83
12H	4H	24.41	25.11	24.89	25.59	26.06	21.05	21.75	21.53	22.23	22.70
	6H	25.11	25.70	25.62	26.20	26.69	21.81	22.39	22.32	22.90	23.39
	8H	25.42	25.94	25.93	26.43	26.99	22.16	22.67	22.67	23.17	23.73