

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: P1055989

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055989
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-S1195D850-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, 80 CRI LEDS
Ballast/Driver: -

Summary

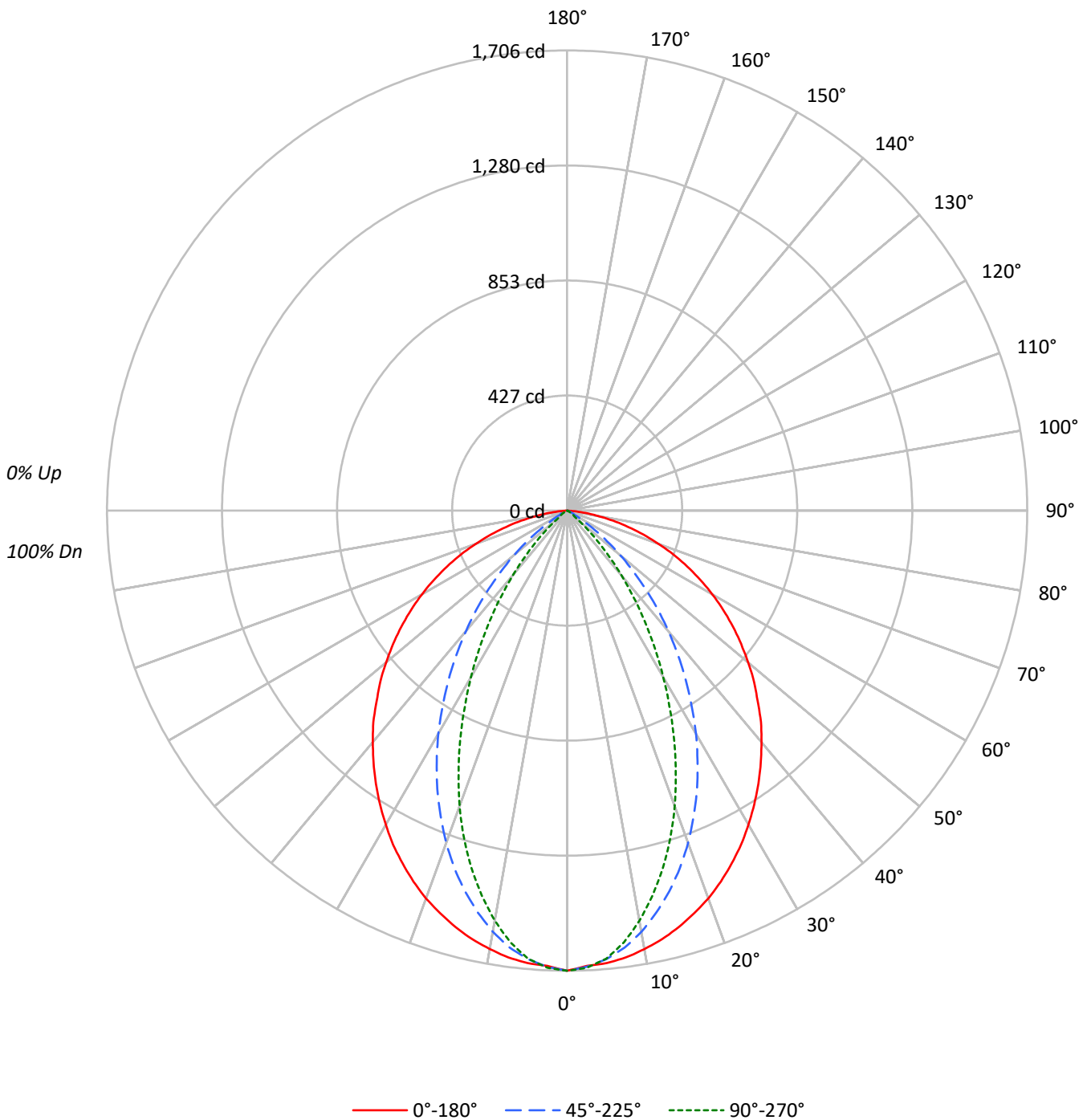
Lumens per Lamp: N/A
Luminaire Lumens: 2384.4 lumens
Efficiency: N/A
Efficacy: 56.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	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°	15083	15083	15083
5°	14948	14814	14799
10°	14821	14235	13860
15°	14635	13380	12554
20°	14399	12338	10969
25°	14081	11111	9153
30°	13728	9750	7274
35°	13341	8268	5416
40°	12934	6737	3610
45°	12485	5144	1987
50°	12055	3520	552
55°	11576	1908	361
60°	11002	592	207
65°	10287	385	105
70°	9296	173	44
75°	8000	58	0
80°	6049	0	0
85°	2546	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12485 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.4	6.6
10°-20°	413.2	17.3
20°-30°	533.9	22.4
30°-40°	510.3	21.4
40°-50°	381.6	16.0
50°-60°	227.1	9.5
60°-70°	115.3	4.8
70°-80°	40.1	1.7
80°-90°	5.5	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°	1104.5	46.3
0°-40°	1614.8	67.7
0°-60°	2223.5	93.3
0°-90°	2384.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2384.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1706	1706	1706	1706	1706	
5°	1684	1698	1669	1661	1668	160
15°	1599	1566	1462	1393	1372	451
25°	1443	1343	1139	988	938	665
35°	1236	1065	766	570	502	773
45°	998	766	411	219	159	772
55°	751	467	124	28	23	670
65°	492	189	18	7	5	486
75°	234	25	2	2	0	249
85°	25	0	0	0	0	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1706.0	1706.0	1706.0	1706.0	1706.0
2.5°	1689.3	1709.3	1692.6	1694.3	1696.0
5°	1684.2	1697.6	1669.2	1660.8	1667.5
7.5°	1670.9	1675.9	1634.1	1612.3	1614.0
10°	1650.8	1645.8	1585.6	1548.8	1543.8
12.5°	1627.4	1610.7	1527.0	1473.5	1461.8
15°	1598.9	1565.5	1461.8	1393.2	1371.5
17.5°	1565.5	1517.0	1389.9	1299.6	1272.8
20°	1530.4	1463.5	1311.3	1199.2	1165.8
22.5°	1488.6	1403.3	1226.0	1093.8	1052.0
25°	1443.4	1343.1	1139.0	988.5	938.3
27.5°	1396.6	1277.8	1047.0	881.4	822.9
30°	1344.7	1209.2	955.0	772.7	712.5
32.5°	1291.2	1139.0	859.7	672.4	605.5
35°	1236.0	1065.4	766.0	570.3	501.8
37.5°	1179.1	991.8	675.7	473.3	403.1
40°	1120.6	916.6	583.7	381.3	312.8
42.5°	1063.7	841.3	496.7	294.4	230.8
45°	998.5	766.0	411.4	219.1	158.9
47.5°	940.0	692.4	329.5	148.9	93.7
50°	876.4	613.8	255.9	87.0	40.1
52.5°	812.9	540.2	187.3	38.5	30.1
55°	751.0	466.6	123.8	28.4	23.4
57.5°	685.7	393.0	66.9	21.7	16.7
60°	622.2	321.1	33.5	16.7	11.7
62.5°	557.0	252.6	26.8	10.0	6.7
65°	491.7	189.0	18.4	6.7	5.0
67.5°	426.5	128.8	11.7	3.3	1.7
70°	359.6	78.6	6.7	1.7	1.7
72.5°	296.0	40.1	3.3	1.7	1.7
75°	234.2	25.1	1.7	1.7	0.0
77.5°	173.9	13.4	1.7	1.7	0.0
80°	118.8	5.0	0.0	0.0	0.0
82.5°	68.6	1.7	0.0	0.0	0.0
85°	25.1	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	19.88	21.21	20.25	21.52	21.84	0.00	0.00	0.00	0.18	0.49
	3H	21.43	22.60	21.80	22.93	23.30	0.00	0.00	0.00	0.00	0.33
	4H	22.02	23.11	22.42	23.47	23.85	0.00	0.00	0.00	0.00	0.23
	6H	22.44	23.44	22.85	23.81	24.21	0.00	0.00	0.00	0.00	0.10
	8H	22.54	23.49	22.97	23.88	24.28	0.00	0.00	0.00	0.00	0.03
	12H	22.55	23.46	22.99	23.85	24.28	0.00	0.00	0.00	0.00	0.00
4H	2H	19.66	20.76	20.06	21.11	21.49	0.00	0.62	0.00	0.97	1.35
	3H	21.22	22.12	21.64	22.52	22.92	0.00	0.38	0.00	0.79	1.19
	4H	21.81	22.60	22.24	23.02	23.47	0.00	0.24	0.00	0.65	1.10
	6H	22.27	22.95	22.73	23.40	23.87	0.00	0.06	0.00	0.51	0.97
	8H	22.39	23.03	22.86	23.48	23.95	0.00	0.00	0.00	0.40	0.87
	12H	22.43	22.99	22.91	23.48	23.95	0.00	0.00	0.00	0.32	0.79
8H	4H	21.67	22.31	22.14	22.76	23.23	1.18	1.82	1.64	2.26	2.73
	6H	22.11	22.63	22.61	23.13	23.61	1.08	1.61	1.59	2.10	2.58
	8H	22.23	22.70	22.75	23.21	23.70	1.02	1.49	1.55	2.01	2.50
	12H	22.28	22.69	22.79	23.19	23.76	0.98	1.39	1.49	1.89	2.46
12H	4H	21.63	22.19	22.11	22.67	23.15	1.59	2.15	2.07	2.64	3.11
	6H	22.05	22.52	22.57	23.03	23.53	1.48	1.95	2.00	2.46	2.96
	8H	22.19	22.60	22.70	23.09	23.66	1.44	1.85	1.95	2.34	2.92