

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: P1055985

Luminaire Tested: S124R3DR-S1195D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055985
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-S1195D835-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

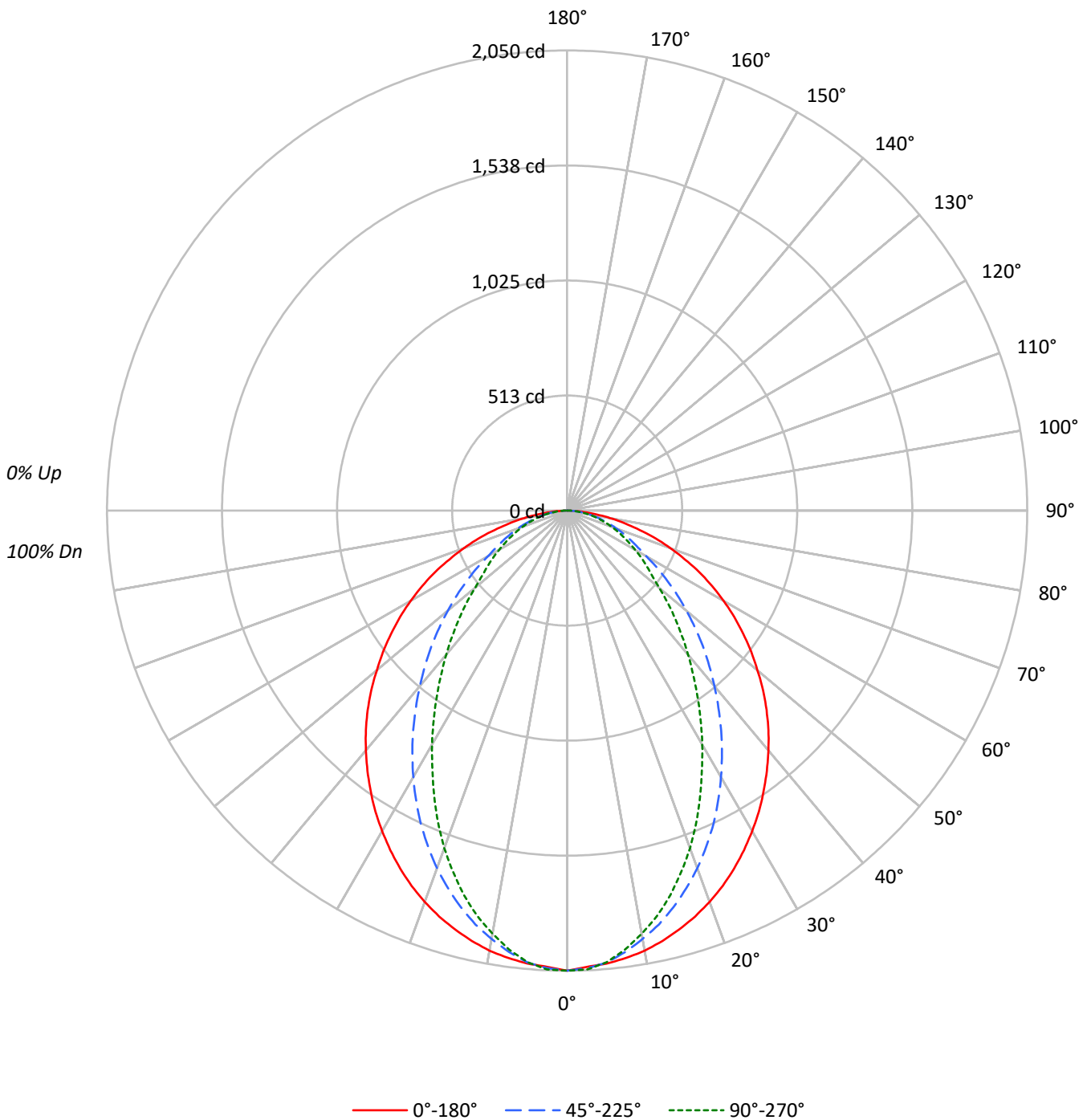
Lumens per Lamp: N/A
Luminaire Lumens: 4082.2 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (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	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°	18121	18121	18121
5°	17977	17936	17922
10°	17873	17399	17182
15°	17683	16745	16234
20°	17453	15950	15056
25°	17169	15036	13683
30°	16829	13996	12287
35°	16474	12909	10939
40°	16101	11784	9678
45°	15708	10692	8505
50°	15226	9543	7344
55°	14762	8392	6671
60°	14242	7200	6187
65°	13598	6531	5774
70°	12631	6044	5457
75°	11437	5565	5151
80°	9985	5142	4837
85°	7649	4748	4433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15708 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.8	4.7
10°-20°	517.6	12.7
20°-30°	716.7	17.6
30°-40°	769.2	18.8
40°-50°	699.6	17.1
50°-60°	550.9	13.5
60°-70°	377.0	9.2
70°-80°	203.0	5.0
80°-90°	57.5	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°	1425.1	34.9
0°-40°	2194.3	53.8
0°-60°	3444.8	84.4
0°-90°	4082.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4082.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2050	2050	2050	2050	2050	
5°	2026	2048	2021	2010	2019	192
15°	1932	1911	1829	1780	1774	545
25°	1760	1688	1541	1430	1403	810
35°	1526	1407	1196	1051	1014	955
45°	1256	1096	855	707	680	969
55°	958	775	544	439	433	856
65°	650	464	312	278	276	641
75°	335	204	163	149	151	357
85°	75	51	47	44	44	91
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2049.6	2049.6	2049.6	2049.6	2049.6
2.5°	2034.5	2058.6	2040.5	2043.6	2046.6
5°	2025.5	2048.1	2020.9	2010.4	2019.4
7.5°	2010.4	2025.5	1983.2	1963.6	1972.7
10°	1990.8	1993.8	1938.0	1909.3	1913.8
12.5°	1963.6	1956.1	1888.2	1847.5	1850.5
15°	1931.9	1910.8	1829.4	1779.6	1773.6
17.5°	1895.8	1861.1	1764.5	1701.2	1689.1
20°	1855.0	1808.3	1695.2	1613.7	1600.2
22.5°	1809.8	1749.5	1619.8	1523.2	1503.6
25°	1760.0	1687.6	1541.3	1429.7	1402.6
27.5°	1705.7	1621.3	1456.9	1334.7	1300.0
30°	1648.4	1551.9	1370.9	1239.7	1203.5
32.5°	1589.6	1481.0	1283.4	1144.7	1107.0
35°	1526.3	1407.1	1196.0	1051.2	1013.5
37.5°	1461.4	1330.2	1107.0	960.7	921.5
40°	1395.0	1253.3	1021.0	870.2	838.5
42.5°	1327.2	1174.9	936.6	785.7	757.1
45°	1256.3	1096.4	855.1	707.3	680.2
47.5°	1183.9	1016.5	772.2	633.4	607.8
50°	1107.0	936.6	693.8	561.0	533.9
52.5°	1033.1	855.1	618.3	490.2	476.6
55°	957.7	775.2	544.4	438.9	432.8
57.5°	882.3	695.3	476.6	398.2	392.1
60°	805.4	616.8	407.2	355.9	349.9
62.5°	728.4	539.9	355.9	315.2	312.2
65°	650.0	464.5	312.2	277.5	276.0
67.5°	567.1	392.1	273.0	244.3	242.8
70°	488.6	319.7	233.8	211.1	211.1
72.5°	414.7	253.4	197.6	179.5	179.5
75°	334.8	203.6	162.9	149.3	150.8
77.5°	263.9	159.9	131.2	122.2	122.2
80°	196.1	119.1	101.0	93.5	95.0
82.5°	132.7	82.9	72.4	67.9	67.9
85°	75.4	51.3	46.8	43.7	43.7
87.5°	27.1	24.1	22.6	19.6	21.1
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	21.21	22.73	21.57	23.05	23.36	16.99	18.51	17.35	18.82	19.14
	3H	22.98	24.35	23.36	24.68	25.04	18.60	19.97	18.97	20.29	20.66
	4H	23.65	24.94	24.05	25.29	25.67	19.23	20.51	19.63	20.86	21.24
	6H	24.16	25.35	24.58	25.72	26.11	19.73	20.92	20.14	21.28	21.67
	8H	24.33	25.46	24.75	25.85	26.25	19.90	21.03	20.32	21.42	21.82
	12H	24.43	25.51	24.86	25.89	26.32	20.02	21.10	20.45	21.49	21.91
4H	2H	21.30	22.59	21.70	22.94	23.32	17.70	18.99	18.10	19.34	19.72
	3H	23.25	24.32	23.66	24.72	25.12	19.51	20.58	19.92	20.98	21.38
	4H	24.00	24.97	24.44	25.38	25.82	20.25	21.21	20.68	21.63	22.07
	6H	24.64	25.48	25.09	25.92	26.38	20.86	21.70	21.32	22.15	22.61
	8H	24.86	25.64	25.32	26.09	26.55	21.08	21.86	21.54	22.31	22.78
	12H	25.01	25.71	25.49	26.19	26.66	21.25	21.95	21.73	22.43	22.90
8H	4H	24.06	24.85	24.52	25.29	25.76	20.64	21.42	21.10	21.87	22.33
	6H	24.76	25.41	25.26	25.90	26.38	21.37	22.02	21.86	22.51	22.99
	8H	25.03	25.61	25.54	26.12	26.61	21.66	22.24	22.17	22.75	23.24
	12H	25.24	25.76	25.75	26.25	26.82	21.90	22.42	22.41	22.91	23.47
12H	4H	24.05	24.75	24.53	25.23	25.70	20.69	21.39	21.17	21.87	22.34
	6H	24.75	25.34	25.27	25.85	26.33	21.45	22.03	21.96	22.54	23.03
	8H	25.06	25.58	25.57	26.07	26.63	21.80	22.32	22.31	22.81	23.37