

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: P1055998

Luminaire Tested: S124R3DR-S1195D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055998
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-S1195D935-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

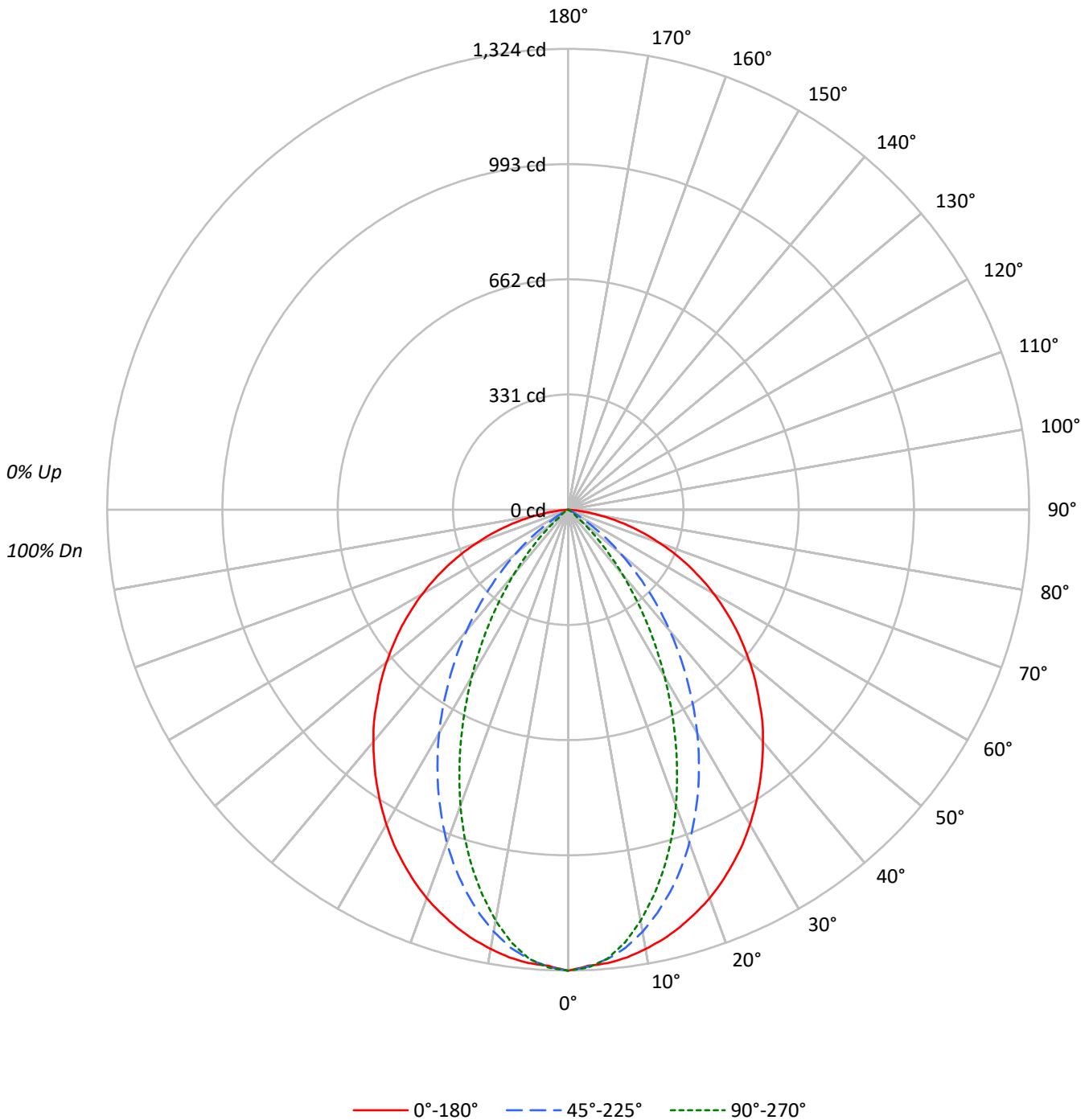
Lumens per Lamp: N/A
Luminaire Lumens: 1851.2 lumens
Efficiency: N/A
Efficacy: 44.2 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	11710	11710	11710
5°	11605	11501	11490
10°	11506	11052	10760
15°	11363	10388	9746
20°	11179	9578	8516
25°	10932	8627	7107
30°	10658	7570	5648
35°	10357	6419	4205
40°	10041	5231	2802
45°	9693	3994	1543
50°	9359	2733	429
55°	8987	1481	281
60°	8541	460	161
65°	7987	299	82
70°	7217	134	34
75°	6210	44	0
80°	4694	0	0
85°	1978	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9693 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	6.6
10°-20°	320.8	17.3
20°-30°	414.5	22.4
30°-40°	396.2	21.4
40°-50°	296.3	16.0
50°-60°	176.3	9.5
60°-70°	89.5	4.8
70°-80°	31.1	1.7
80°-90°	4.3	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°	857.5	46.3
0°-40°	1253.7	67.7
0°-60°	1726.3	93.3
0°-90°	1851.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1851.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1308	1318	1296	1289	1295	124
15°	1241	1215	1135	1082	1065	350
25°	1121	1043	884	767	728	516
35°	960	827	595	443	390	600
45°	775	595	319	170	123	599
55°	583	362	96	22	18	521
65°	382	147	14	5	4	377
75°	182	20	1	1	0	193
85°	20	0	0	0	0	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1324.5	1324.5	1324.5	1324.5	1324.5
2.5°	1311.5	1327.1	1314.1	1315.4	1316.7
5°	1307.6	1318.0	1295.9	1289.4	1294.6
7.5°	1297.2	1301.1	1268.7	1251.8	1253.1
10°	1281.6	1277.7	1231.0	1202.4	1198.5
12.5°	1263.5	1250.5	1185.5	1144.0	1134.9
15°	1241.4	1215.4	1134.9	1081.7	1064.8
17.5°	1215.4	1177.8	1079.1	1008.9	988.2
20°	1188.1	1136.2	1018.0	931.0	905.1
22.5°	1155.7	1089.5	951.8	849.2	816.8
25°	1120.6	1042.7	884.3	767.4	728.5
27.5°	1084.3	992.1	812.9	684.3	638.9
30°	1044.0	938.8	741.5	599.9	553.2
32.5°	1002.5	884.3	667.4	522.0	470.1
35°	959.6	827.2	594.7	442.8	389.6
37.5°	915.5	770.0	524.6	367.5	312.9
40°	870.0	711.6	453.2	296.1	242.8
42.5°	825.9	653.2	385.7	228.5	179.2
45°	775.2	594.7	319.4	170.1	123.4
47.5°	729.8	537.6	255.8	115.6	72.7
50°	680.4	476.6	198.7	67.5	31.2
52.5°	631.1	419.4	145.4	29.9	23.4
55°	583.0	362.3	96.1	22.1	18.2
57.5°	532.4	305.2	51.9	16.9	13.0
60°	483.0	249.3	26.0	13.0	9.1
62.5°	432.4	196.1	20.8	7.8	5.2
65°	381.8	146.7	14.3	5.2	3.9
67.5°	331.1	100.0	9.1	2.6	1.3
70°	279.2	61.0	5.2	1.3	1.3
72.5°	229.8	31.2	2.6	1.3	1.3
75°	181.8	19.5	1.3	1.3	0.0
77.5°	135.0	10.4	1.3	1.3	0.0
80°	92.2	3.9	0.0	0.0	0.0
82.5°	53.2	1.3	0.0	0.0	0.0
85°	19.5	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	19.00	20.33	19.37	20.65	20.96	0.00	0.00	0.00	0.00	0.00
	3H	20.55	21.72	20.93	22.05	22.42	0.00	0.00	0.00	0.00	0.00
	4H	21.14	22.24	21.54	22.59	22.97	0.00	0.00	0.00	0.00	0.00
	6H	21.56	22.56	21.97	22.93	23.33	0.00	0.00	0.00	0.00	0.00
	8H	21.66	22.61	22.09	23.00	23.40	0.00	0.00	0.00	0.00	0.00
	12H	21.68	22.59	22.11	22.97	23.40	0.00	0.00	0.00	0.00	0.00
4H	2H	18.78	19.88	19.18	20.23	20.61	0.00	0.00	0.00	0.11	0.49
	3H	20.34	21.24	20.76	21.64	22.05	0.00	0.00	0.00	0.00	0.33
	4H	20.93	21.73	21.36	22.15	22.59	0.00	0.00	0.00	0.00	0.23
	6H	21.39	22.08	21.85	22.52	22.99	0.00	0.00	0.00	0.00	0.11
	8H	21.51	22.15	21.98	22.60	23.07	0.00	0.00	0.00	0.00	0.01
	12H	21.55	22.11	22.03	22.60	23.07	0.00	0.00	0.00	0.00	0.00
8H	4H	20.79	21.43	21.26	21.88	22.35	0.30	0.95	0.77	1.39	1.86
	6H	21.23	21.75	21.74	22.25	22.73	0.21	0.74	0.72	1.23	1.71
	8H	21.35	21.82	21.87	22.33	22.83	0.15	0.62	0.67	1.14	1.63
	12H	21.40	21.81	21.91	22.31	22.88	0.11	0.52	0.62	1.02	1.59
12H	4H	20.75	21.31	21.23	21.80	22.27	0.72	1.28	1.20	1.76	2.24
	6H	21.17	21.64	21.69	22.15	22.65	0.61	1.08	1.13	1.59	2.08
	8H	21.31	21.72	21.82	22.21	22.78	0.57	0.98	1.08	1.47	2.04