

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: P1056115

Luminaire Tested: S124R3DR-H1195D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056115
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-H1195D830-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

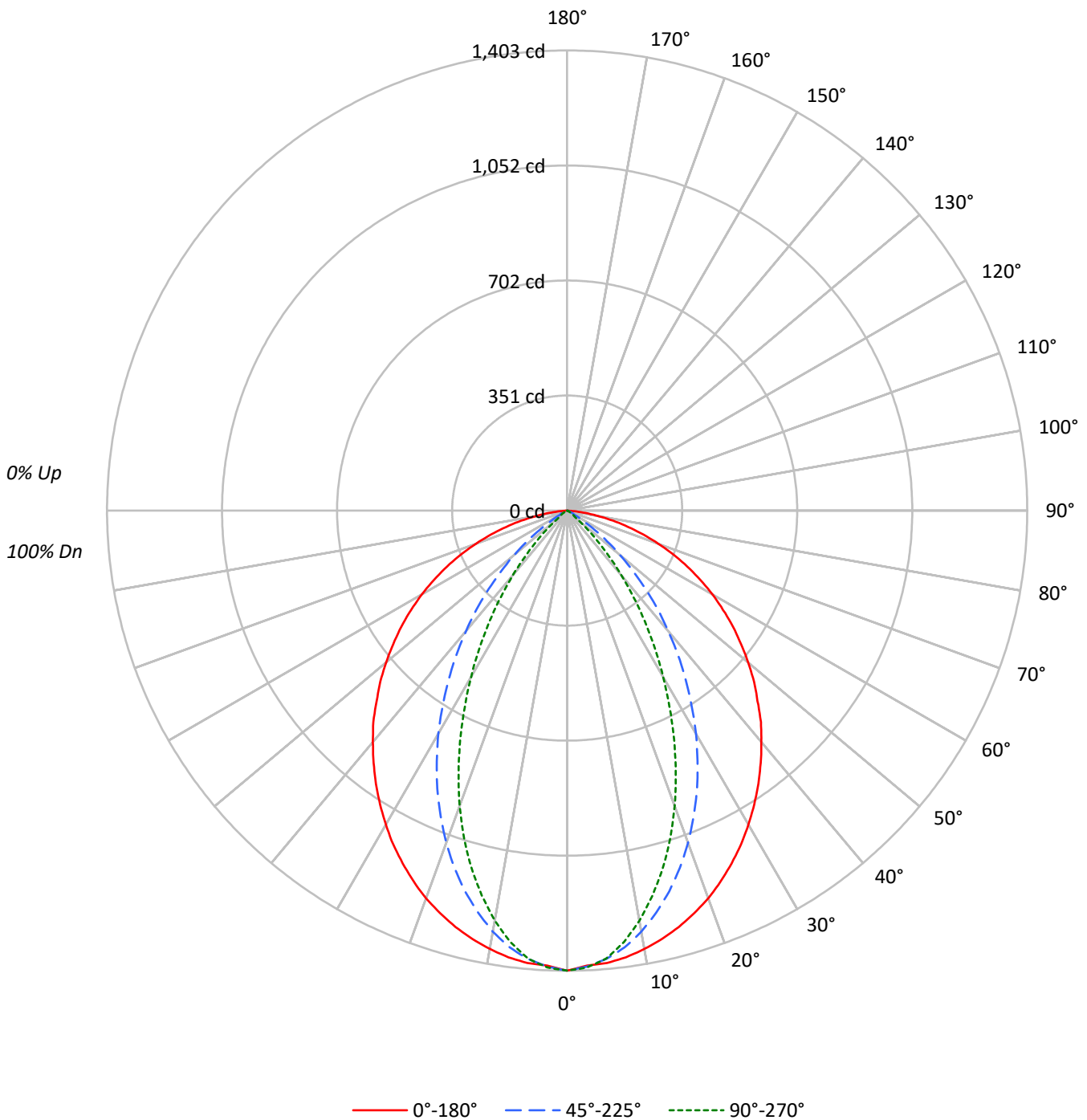
Lumens per Lamp: N/A
Luminaire Lumens: 1960.3 lumens
Efficiency: N/A
Efficacy: 53.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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	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°	12401	12401	12401
5°	12289	12179	12167
10°	12185	11703	11395
15°	12033	11000	10320
20°	11838	10143	9017
25°	11577	9135	7525
30°	11286	8016	5981
35°	10968	6798	4452
40°	10633	5539	2967
45°	10264	4230	1633
50°	9910	2894	454
55°	9517	1569	297
60°	9045	486	170
65°	8458	316	86
70°	7641	142	36
75°	6576	48	0
80°	4969	0	0
85°	2090	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10264 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	6.6
10°-20°	339.7	17.3
20°-30°	439.0	22.4
30°-40°	419.5	21.4
40°-50°	313.8	16.0
50°-60°	186.7	9.5
60°-70°	94.8	4.8
70°-80°	33.0	1.7
80°-90°	4.5	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°	908.0	46.3
0°-40°	1327.6	67.7
0°-60°	1828.1	93.3
0°-90°	1960.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1960.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1403	1403	1403	1403	1403	
5°	1385	1396	1372	1365	1371	131
15°	1315	1287	1202	1145	1128	370
25°	1187	1104	936	813	771	546
35°	1016	876	630	469	412	635
45°	821	630	338	180	131	635
55°	617	384	102	23	19	551
65°	404	155	15	6	4	400
75°	192	21	1	1	0	204
85°	21	0	0	0	0	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1402.6	1402.6	1402.6	1402.6	1402.6
2.5°	1388.8	1405.3	1391.6	1392.9	1394.3
5°	1384.7	1395.7	1372.3	1365.4	1370.9
7.5°	1373.7	1377.8	1343.4	1325.6	1326.9
10°	1357.2	1353.1	1303.6	1273.3	1269.2
12.5°	1337.9	1324.2	1255.4	1211.4	1201.8
15°	1314.6	1287.1	1201.8	1145.4	1127.5
17.5°	1287.1	1247.2	1142.7	1068.4	1046.4
20°	1258.2	1203.2	1078.0	985.9	958.4
22.5°	1223.8	1153.7	1007.9	899.3	864.9
25°	1186.7	1104.2	936.4	812.7	771.4
27.5°	1148.2	1050.5	860.8	724.7	676.5
30°	1105.5	994.2	785.2	635.3	585.8
32.5°	1061.5	936.4	706.8	552.8	497.8
35°	1016.2	875.9	629.8	468.9	412.5
37.5°	969.4	815.4	555.5	389.1	331.4
40°	921.3	753.5	479.9	313.5	257.1
42.5°	874.5	691.7	408.4	242.0	189.8
45°	820.9	629.8	338.3	180.1	130.6
47.5°	772.8	569.3	270.9	122.4	77.0
50°	720.5	504.6	210.4	71.5	33.0
52.5°	668.3	444.1	154.0	31.6	24.8
55°	617.4	383.6	101.8	23.4	19.3
57.5°	563.8	323.1	55.0	17.9	13.8
60°	511.5	264.0	27.5	13.8	9.6
62.5°	457.9	207.6	22.0	8.3	5.5
65°	404.3	155.4	15.1	5.5	4.1
67.5°	350.6	105.9	9.6	2.8	1.4
70°	295.6	64.6	5.5	1.4	1.4
72.5°	243.4	33.0	2.8	1.4	1.4
75°	192.5	20.6	1.4	1.4	0.0
77.5°	143.0	11.0	1.4	1.4	0.0
80°	97.6	4.1	0.0	0.0	0.0
82.5°	56.4	1.4	0.0	0.0	0.0
85°	20.6	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	19.20	20.53	19.57	20.84	21.16	0.00	0.00	0.00	0.00	0.00
	3H	20.74	21.92	21.12	22.25	22.62	0.00	0.00	0.00	0.00	0.00
	4H	21.34	22.43	21.74	22.78	23.17	0.00	0.00	0.00	0.00	0.00
	6H	21.76	22.76	22.17	23.13	23.53	0.00	0.00	0.00	0.00	0.00
	8H	21.85	22.81	22.28	23.20	23.60	0.00	0.00	0.00	0.00	0.00
	12H	21.87	22.78	22.31	23.17	23.60	0.00	0.00	0.00	0.00	0.00
4H	2H	18.98	20.08	19.38	20.43	20.81	0.00	0.00	0.00	0.30	0.69
	3H	20.54	21.44	20.96	21.84	22.24	0.00	0.00	0.00	0.12	0.53
	4H	21.13	21.92	21.56	22.34	22.79	0.00	0.00	0.00	0.00	0.43
	6H	21.59	22.27	22.05	22.72	23.19	0.00	0.00	0.00	0.00	0.31
	8H	21.71	22.35	22.18	22.79	23.27	0.00	0.00	0.00	0.00	0.21
	12H	21.75	22.31	22.23	22.80	23.27	0.00	0.00	0.00	0.00	0.13
8H	4H	20.99	21.63	21.46	22.08	22.55	0.50	1.15	0.97	1.59	2.06
	6H	21.43	21.95	21.93	22.45	22.93	0.41	0.94	0.92	1.43	1.91
	8H	21.55	22.02	22.07	22.53	23.02	0.35	0.82	0.87	1.34	1.83
	12H	21.60	22.01	22.11	22.50	23.08	0.31	0.72	0.82	1.22	1.79
12H	4H	20.94	21.51	21.43	21.99	22.47	0.92	1.48	1.40	1.96	2.44
	6H	21.37	21.84	21.89	22.35	22.84	0.81	1.28	1.33	1.79	2.28
	8H	21.50	21.92	22.02	22.41	22.98	0.76	1.18	1.28	1.67	2.24