

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: P1056216

Luminaire Tested: S124R3DR-H795D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056216  
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-H795D935-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

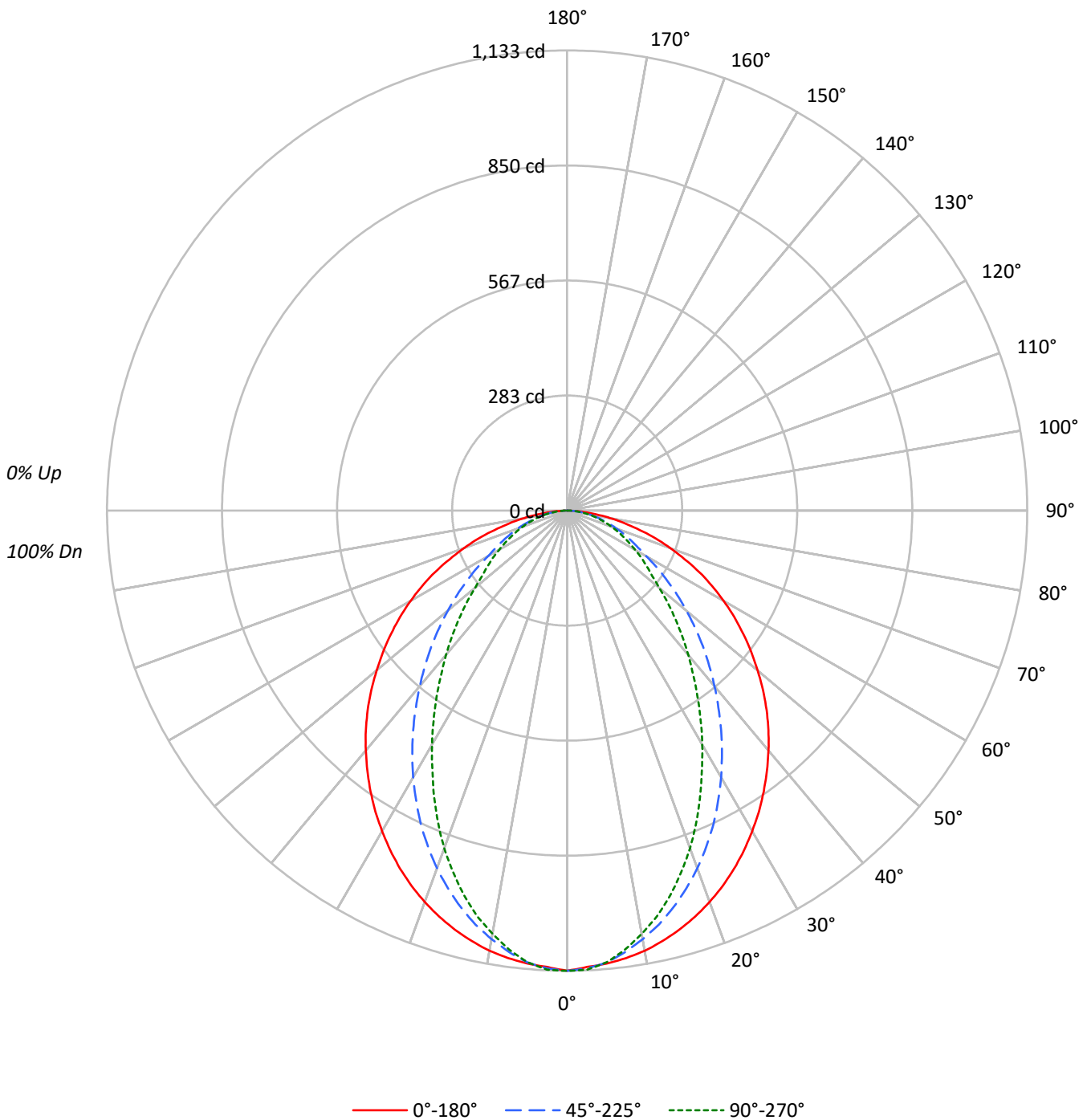
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2256.8 lumens  
Efficiency: N/A  
Efficacy: 94.8 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): 23.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	10018	10018	10018
5°	9938	9915	9908
10°	9881	9619	9498
15°	9777	9258	8975
20°	9649	8818	8323
25°	9492	8313	7564
30°	9304	7738	6792
35°	9107	7137	6048
40°	8901	6515	5351
45°	8684	5910	4701
50°	8418	5275	4060
55°	8160	4640	3689
60°	7872	3980	3420
65°	7519	3611	3192
70°	6982	3340	3017
75°	6323	3074	2849
80°	5519	2846	2673
85°	4230	2617	2455

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8684 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.5	4.7
10°-20°	286.2	12.7
20°-30°	396.2	17.6
30°-40°	425.3	18.8
40°-50°	386.7	17.1
50°-60°	304.5	13.5
60°-70°	208.5	9.2
70°-80°	112.2	5.0
80°-90°	31.8	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°	787.9	34.9
0°-40°	1213.1	53.8
0°-60°	1904.4	84.4
0°-90°	2256.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2256.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1120	1132	1117	1111	1116	106
15°	1068	1056	1011	984	980	301
25°	973	933	852	790	775	448
35°	844	778	661	581	560	528
45°	694	606	473	391	376	535
55°	529	429	301	243	239	473
65°	359	257	173	153	153	355
75°	185	113	90	82	83	198
85°	42	28	26	24	24	50
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1133.1	<i>1133.1</i>	1133.1	1133.1	1133.1
2.5°	<i>1124.8</i>	<i>1138.1</i>	<i>1128.1</i>	<i>1129.8</i>	<i>1131.4</i>
5°	1119.7	<i>1132.3</i>	1117.2	1111.4	1116.4
7.5°	1111.4	<i>1119.7</i>	1096.4	1085.6	1090.6
10°	1100.6	<i>1102.2</i>	1071.4	1055.5	1058.0
12.5°	1085.6	<i>1081.4</i>	1043.9	1021.4	1023.0
15°	1068.1	<i>1056.4</i>	1011.4	983.8	980.5
17.5°	1048.0	<i>1028.9</i>	975.5	940.5	933.8
20°	1025.5	<i>999.7</i>	937.2	892.1	884.6
22.5°	1000.5	<i>967.2</i>	895.5	842.1	831.3
25°	973.0	<i>933.0</i>	852.1	790.4	775.4
27.5°	943.0	<i>896.3</i>	805.4	737.9	718.7
30°	911.3	<i>857.9</i>	757.9	685.4	665.3
32.5°	878.8	<i>818.8</i>	709.5	632.8	612.0
35°	843.8	<i>777.9</i>	661.2	581.1	560.3
37.5°	807.9	<i>735.4</i>	612.0	531.1	509.4
40°	771.2	<i>692.9</i>	564.5	481.1	463.6
42.5°	733.7	<i>649.5</i>	517.8	434.4	418.6
45°	694.5	<i>606.1</i>	472.7	391.0	376.0
47.5°	654.5	<i>562.0</i>	426.9	350.2	336.0
50°	612.0	<i>517.8</i>	383.5	310.2	295.2
52.5°	571.1	<i>472.7</i>	341.8	271.0	263.5
55°	529.4	<i>428.6</i>	301.0	242.6	239.3
57.5°	487.8	<i>384.4</i>	263.5	220.1	216.8
60°	445.2	<i>341.0</i>	225.1	196.8	193.4
62.5°	402.7	<i>298.5</i>	196.8	174.3	172.6
65°	359.4	<i>256.8</i>	172.6	153.4	152.6
67.5°	313.5	<i>216.8</i>	150.9	135.1	134.2
70°	270.1	<i>176.8</i>	129.2	116.7	116.7
72.5°	229.3	<i>140.1</i>	109.2	99.2	99.2
75°	185.1	<i>112.6</i>	90.0	82.5	83.4
77.5°	145.9	<i>88.4</i>	72.5	67.5	67.5
80°	108.4	<i>65.9</i>	55.9	51.7	52.5
82.5°	73.4	<i>45.9</i>	40.0	37.5	37.5
85°	41.7	<i>28.3</i>	25.8	24.2	24.2
87.5°	15.0	<i>13.3</i>	12.5	10.8	11.7
90°	0.0	<i>0.0</i>	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	19.15	20.67	19.51	20.99	21.30	14.93	16.45	15.29	16.76	17.08
	3H	20.92	22.29	21.30	22.62	22.98	16.54	17.91	16.91	18.23	18.60
	4H	21.60	22.88	21.99	23.23	23.61	17.17	18.45	17.57	18.80	19.18
	6H	22.10	23.29	22.52	23.66	24.05	17.67	18.85	18.08	19.22	19.61
	8H	22.27	23.40	22.69	23.79	24.19	17.84	18.97	18.26	19.36	19.76
	12H	22.37	23.45	22.80	23.83	24.26	17.96	19.04	18.39	19.43	19.85
4H	2H	19.24	20.53	19.64	20.88	21.26	15.64	16.93	16.04	17.28	17.66
	3H	21.19	22.26	21.60	22.66	23.06	17.45	18.52	17.86	18.92	19.32
	4H	21.94	22.91	22.38	23.32	23.76	18.19	19.15	18.62	19.57	20.01
	6H	22.58	23.42	23.04	23.86	24.32	18.80	19.64	19.26	20.09	20.54
	8H	22.80	23.58	23.26	24.03	24.49	19.02	19.80	19.48	20.25	20.72
	12H	22.95	23.66	23.44	24.13	24.60	19.19	19.89	19.67	20.37	20.84
8H	4H	22.00	22.79	22.46	23.23	23.70	18.58	19.36	19.04	19.80	20.27
	6H	22.70	23.35	23.20	23.84	24.32	19.31	19.96	19.80	20.45	20.92
	8H	22.97	23.55	23.48	24.06	24.55	19.60	20.18	20.11	20.69	21.18
	12H	23.19	23.70	23.70	24.19	24.76	19.84	20.36	20.35	20.85	21.41
12H	4H	21.99	22.69	22.47	23.17	23.64	18.63	19.33	19.11	19.81	20.28
	6H	22.69	23.28	23.21	23.79	24.27	19.39	19.97	19.90	20.48	20.97
	8H	23.00	23.52	23.51	24.01	24.57	19.74	20.25	20.25	20.75	21.31