

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: P1055966

Luminaire Tested: S124R3DR-S1020D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055966  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1020D927-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

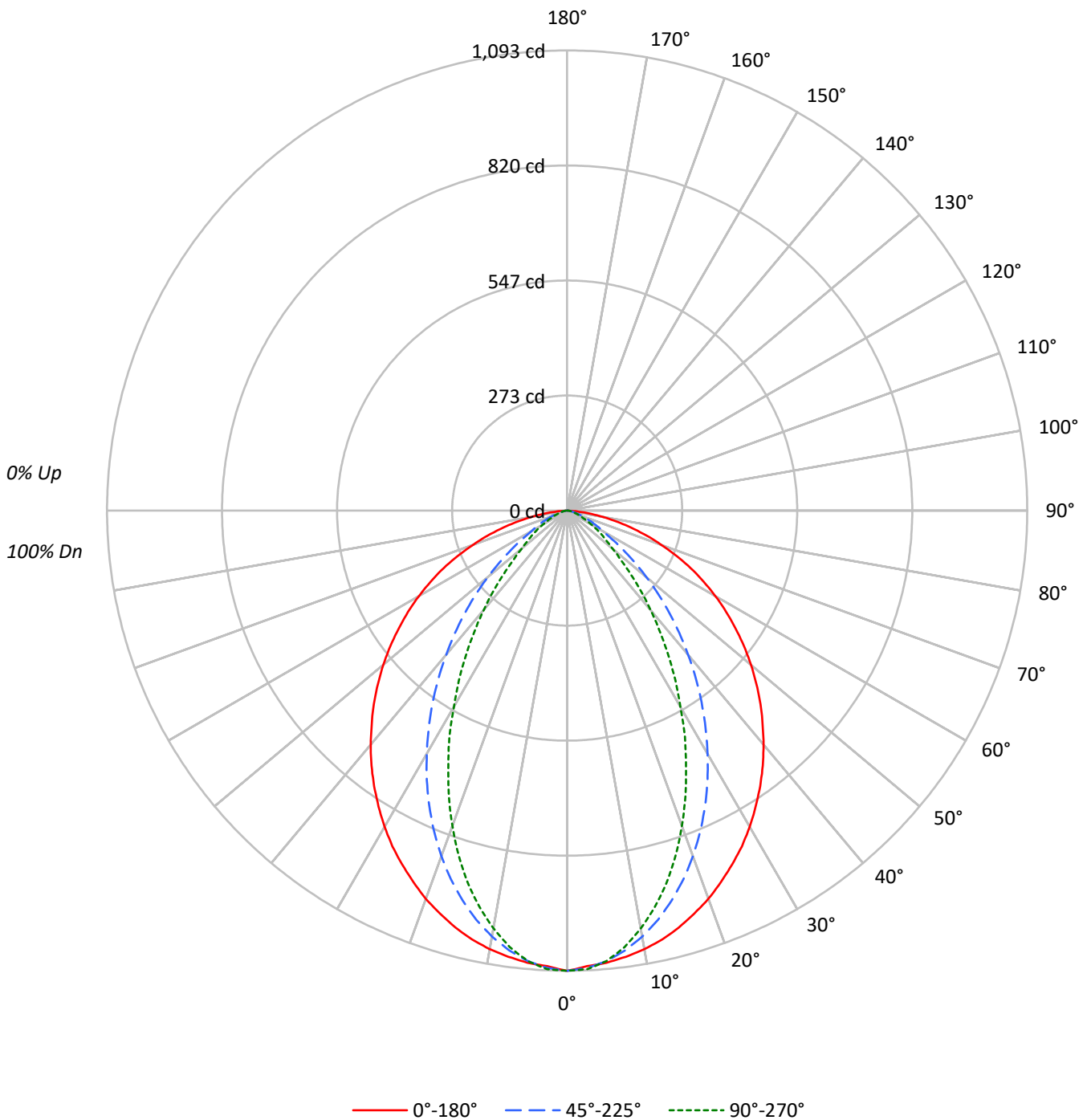
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1767.9 lumens  
Efficiency: N/A  
Efficacy: 50.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.7  
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9666	9666	9666
5°	9568	9532	9532
10°	9496	9222	9048
15°	9383	8778	8368
20°	9234	8218	7500
25°	9047	7557	6515
30°	8854	6807	5487
35°	8625	6010	4516
40°	8377	5158	3561
45°	8121	4290	2661
50°	7842	3374	1946
55°	7532	2496	1554
60°	7200	1728	1188
65°	6772	1341	872
70°	6132	946	685
75°	5356	659	523
80°	4302	519	468
85°	2374	416	416

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8121 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.4	5.7
10°-20°	271.0	15.3
20°-30°	361.4	20.4
30°-40°	363.9	20.6
40°-50°	298.4	16.9
50°-60°	204.0	11.5
60°-70°	114.0	6.4
70°-80°	45.2	2.6
80°-90°	8.6	0.5
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°	733.8	41.5
0°-40°	1097.7	62.1
0°-60°	1600.1	90.5
0°-90°	1767.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1767.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1078	1090	1074	1069	1074	102
15°	1025	1014	959	925	914	289
25°	927	882	775	696	668	427
35°	799	715	557	451	418	500
45°	650	530	343	241	213	501
55°	489	343	162	108	101	437
65°	324	163	64	46	42	320
75°	157	43	19	16	15	168
85°	23	4	4	4	4	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1093.3	1093.3	1093.3	1093.3	1093.3
2.5°	1083.2	1096.4	1087.2	1088.2	1090.3
5°	1078.1	1090.3	1074.0	1068.9	1074.0
7.5°	1068.9	1078.1	1053.6	1043.5	1045.5
10°	1057.7	1060.8	1027.2	1009.9	1007.8
12.5°	1043.5	1039.4	995.6	970.2	964.0
15°	1025.1	1013.9	959.0	925.4	914.2
17.5°	1003.8	984.4	918.2	874.5	858.2
20°	981.4	952.9	873.4	817.5	797.1
22.5°	954.9	919.3	825.6	757.4	734.0
25°	927.4	881.6	774.7	696.3	667.8
27.5°	898.9	842.9	721.8	634.2	605.7
30°	867.3	801.2	666.8	572.1	537.5
32.5°	833.7	758.4	611.8	511.0	478.5
35°	799.1	714.6	556.8	451.0	418.4
37.5°	763.5	669.8	501.9	394.0	361.4
40°	725.8	624.0	446.9	340.0	308.5
42.5°	687.2	577.2	394.0	289.1	259.6
45°	649.5	530.4	343.1	241.3	212.8
47.5°	609.8	483.6	293.2	196.5	172.0
50°	570.1	436.7	245.3	157.8	141.5
52.5°	529.4	389.9	201.6	129.3	118.1
55°	488.6	343.1	161.9	107.9	100.8
57.5°	447.9	296.2	125.2	91.6	83.5
60°	407.2	250.4	97.7	74.3	67.2
62.5°	365.5	204.6	80.4	59.0	52.9
65°	323.7	162.9	64.1	45.8	41.7
67.5°	282.0	124.2	48.9	35.6	32.6
70°	237.2	88.6	36.6	27.5	26.5
72.5°	198.5	60.1	26.5	21.4	20.4
75°	156.8	42.8	19.3	16.3	15.3
77.5°	121.1	27.5	14.3	13.2	12.2
80°	84.5	15.3	10.2	9.2	9.2
82.5°	51.9	8.1	7.1	6.1	6.1
85°	23.4	4.1	4.1	4.1	4.1
87.5°	4.1	2.0	2.0	2.0	2.0
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	18.61	20.01	18.97	20.33	20.64	9.70	11.10	10.06	11.41	11.73
	3H	20.19	21.44	20.57	21.77	22.14	10.29	11.54	10.67	11.87	12.23
	4H	20.79	21.96	21.19	22.31	22.69	10.45	11.61	10.85	11.96	12.35
	6H	21.22	22.29	21.63	22.66	23.06	10.55	11.63	10.97	12.00	12.39
	8H	21.33	22.35	21.76	22.74	23.15	10.57	11.59	11.00	11.98	12.39
	12H	21.37	22.35	21.81	22.73	23.16	10.58	11.56	11.01	11.94	12.37
4H	2H	18.46	19.63	18.86	19.98	20.36	10.28	11.45	10.68	11.80	12.18
	3H	20.11	21.07	20.52	21.47	21.87	10.99	11.95	11.40	12.35	12.75
	4H	20.71	21.57	21.15	21.99	22.43	11.20	12.05	11.63	12.47	12.91
	6H	21.21	21.95	21.67	22.39	22.86	11.36	12.10	11.82	12.55	13.01
	8H	21.35	22.04	21.82	22.49	22.96	11.40	12.09	11.86	12.53	13.00
	12H	21.42	22.03	21.91	22.52	22.99	11.42	12.03	11.91	12.52	12.99
8H	4H	20.61	21.30	21.07	21.74	22.21	11.47	12.16	11.93	12.61	13.07
	6H	21.09	21.65	21.59	22.15	22.63	11.67	12.24	12.17	12.73	13.21
	8H	21.23	21.74	21.75	22.25	22.74	11.73	12.24	12.25	12.75	13.24
	12H	21.32	21.77	21.84	22.27	22.83	11.79	12.24	12.30	12.73	13.30
12H	4H	20.57	21.18	21.05	21.66	22.14	11.49	12.11	11.98	12.59	13.06
	6H	21.03	21.54	21.55	22.06	22.55	11.70	12.21	12.22	12.72	13.21
	8H	21.20	21.65	21.71	22.14	22.71	11.79	12.24	12.31	12.74	13.30