

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: P1055999

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055999  
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-S1195D935-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

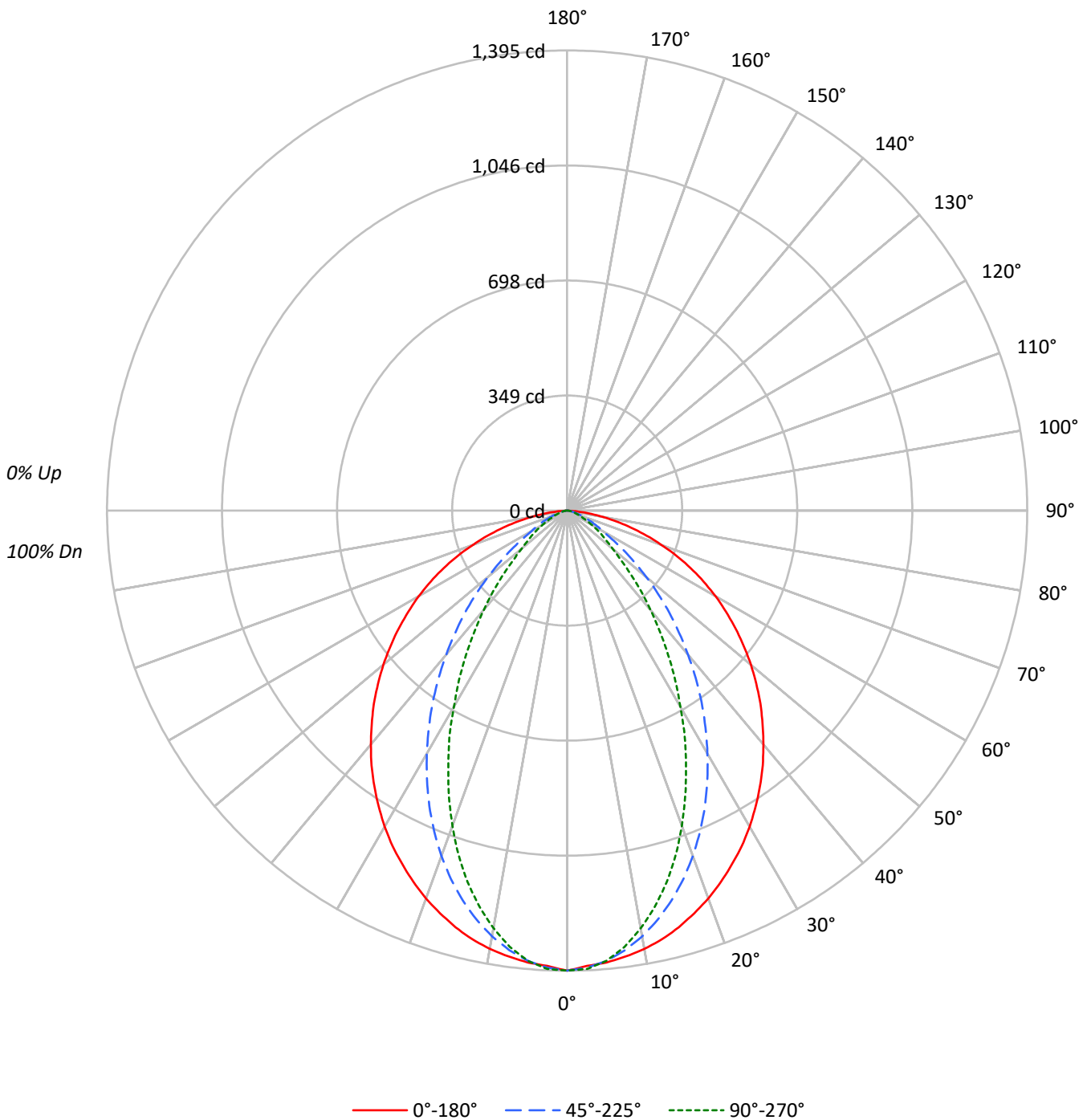
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2255.0 lumens  
Efficiency: N/A  
Efficacy: 53.8 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): 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	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°	12330	12330	12330
5°	12204	12158	12158
10°	12113	11763	11541
15°	11969	11196	10674
20°	11778	10482	9566
25°	11540	9640	8310
30°	11294	8683	6999
35°	11002	7667	5760
40°	10685	6579	4542
45°	10359	5472	3393
50°	10002	4304	2483
55°	9608	3183	1982
60°	9184	2205	1515
65°	8638	1711	1113
70°	7822	1207	874
75°	6832	844	666
80°	5489	662	596
85°	3033	528	528

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10359 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.4	5.7
10°-20°	345.6	15.3
20°-30°	461.0	20.4
30°-40°	464.2	20.6
40°-50°	380.7	16.9
50°-60°	260.2	11.5
60°-70°	145.4	6.4
70°-80°	57.7	2.6
80°-90°	11.0	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°	936.0	41.5
0°-40°	1400.2	62.1
0°-60°	2041.0	90.5
0°-90°	2255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2255.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1395	1395	1395	1395	1395	
5°	1375	1391	1370	1363	1370	130
15°	1308	1293	1223	1180	1166	368
25°	1183	1124	988	888	852	545
35°	1019	912	710	575	534	637
45°	828	676	438	308	271	639
55°	623	438	206	138	129	557
65°	413	208	82	58	53	408
75°	200	54	25	21	20	214
85°	30	5	5	5	5	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1394.6	1394.6	1394.6	1394.6	1394.6
2.5°	1381.6	1398.5	1386.8	1388.1	1390.7
5°	1375.1	1390.7	1369.9	1363.4	1369.9
7.5°	1363.4	1375.1	1344.0	1331.0	1333.6
10°	1349.2	1353.1	1310.2	1288.1	1285.5
12.5°	1331.0	1325.8	1269.9	1237.5	1229.7
15°	1307.6	1293.3	1223.2	1180.4	1166.1
17.5°	1280.3	1255.7	1171.3	1115.4	1094.6
20°	1251.8	1215.4	1114.1	1042.7	1016.7
22.5°	1218.0	1172.6	1053.1	966.1	936.2
25°	1182.9	1124.5	988.2	888.2	851.8
27.5°	1146.6	1075.2	920.6	809.0	772.6
30°	1106.3	1021.9	850.5	729.8	685.6
32.5°	1063.5	967.4	780.4	651.9	610.3
35°	1019.3	911.6	710.3	575.2	533.7
37.5°	973.9	854.4	640.2	502.5	461.0
40°	925.8	796.0	570.0	433.7	393.5
42.5°	876.5	736.3	502.5	368.8	331.1
45°	828.5	676.5	437.6	307.7	271.4
47.5°	777.8	616.8	374.0	250.6	219.4
50°	727.2	557.1	312.9	201.3	180.5
52.5°	675.2	497.3	257.1	164.9	150.6
55°	623.3	437.6	206.5	137.6	128.6
57.5°	571.3	377.9	159.7	116.9	106.5
60°	519.4	319.4	124.7	94.8	85.7
62.5°	466.2	261.0	102.6	75.3	67.5
65°	412.9	207.8	81.8	58.4	53.2
67.5°	359.7	158.4	62.3	45.4	41.6
70°	302.6	113.0	46.7	35.1	33.8
72.5°	253.2	76.6	33.8	27.3	26.0
75°	200.0	54.5	24.7	20.8	19.5
77.5°	154.5	35.1	18.2	16.9	15.6
80°	107.8	19.5	13.0	11.7	11.7
82.5°	66.2	10.4	9.1	7.8	7.8
85°	29.9	5.2	5.2	5.2	5.2
87.5°	5.2	2.6	2.6	2.6	2.6
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	19.45	20.86	19.82	21.17	21.49	10.54	11.95	10.91	12.26	12.58
	3H	21.04	22.29	21.42	22.62	22.98	11.14	12.39	11.51	12.72	13.08
	4H	21.63	22.80	22.03	23.15	23.53	11.29	12.46	11.69	12.81	13.19
	6H	22.06	23.14	22.48	23.51	23.90	11.40	12.48	11.81	12.84	13.24
	8H	22.18	23.20	22.61	23.59	23.99	11.42	12.44	11.85	12.83	13.24
	12H	22.22	23.20	22.65	23.58	24.01	11.43	12.40	11.86	12.79	13.22
4H	2H	19.31	20.47	19.71	20.82	21.21	11.13	12.29	11.53	12.64	13.03
	3H	20.95	21.91	21.37	22.31	22.72	11.84	12.80	12.25	13.20	13.60
	4H	21.56	22.42	21.99	22.84	23.28	12.04	12.90	12.48	13.32	13.76
	6H	22.05	22.79	22.51	23.24	23.70	12.21	12.95	12.67	13.40	13.86
	8H	22.19	22.89	22.66	23.33	23.80	12.24	12.94	12.71	13.38	13.85
	12H	22.27	22.88	22.75	23.36	23.84	12.27	12.88	12.75	13.36	13.84
8H	4H	21.45	22.14	21.92	22.59	23.06	12.31	13.01	12.78	13.45	13.92
	6H	21.93	22.50	22.43	23.00	23.47	12.52	13.09	13.02	13.58	14.06
	8H	22.08	22.59	22.60	23.10	23.59	12.58	13.08	13.10	13.60	14.09
	12H	22.17	22.62	22.68	23.11	23.68	12.64	13.08	13.15	13.58	14.15
12H	4H	21.41	22.03	21.90	22.51	22.98	12.34	12.96	12.83	13.44	13.91
	6H	21.88	22.39	22.40	22.90	23.39	12.55	13.06	13.07	13.57	14.06
	8H	22.04	22.49	22.56	22.99	23.55	12.64	13.09	13.15	13.58	14.15