

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: P1056119

Luminaire Tested: S124R3DR-H1195D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056119  
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-H1195D835-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

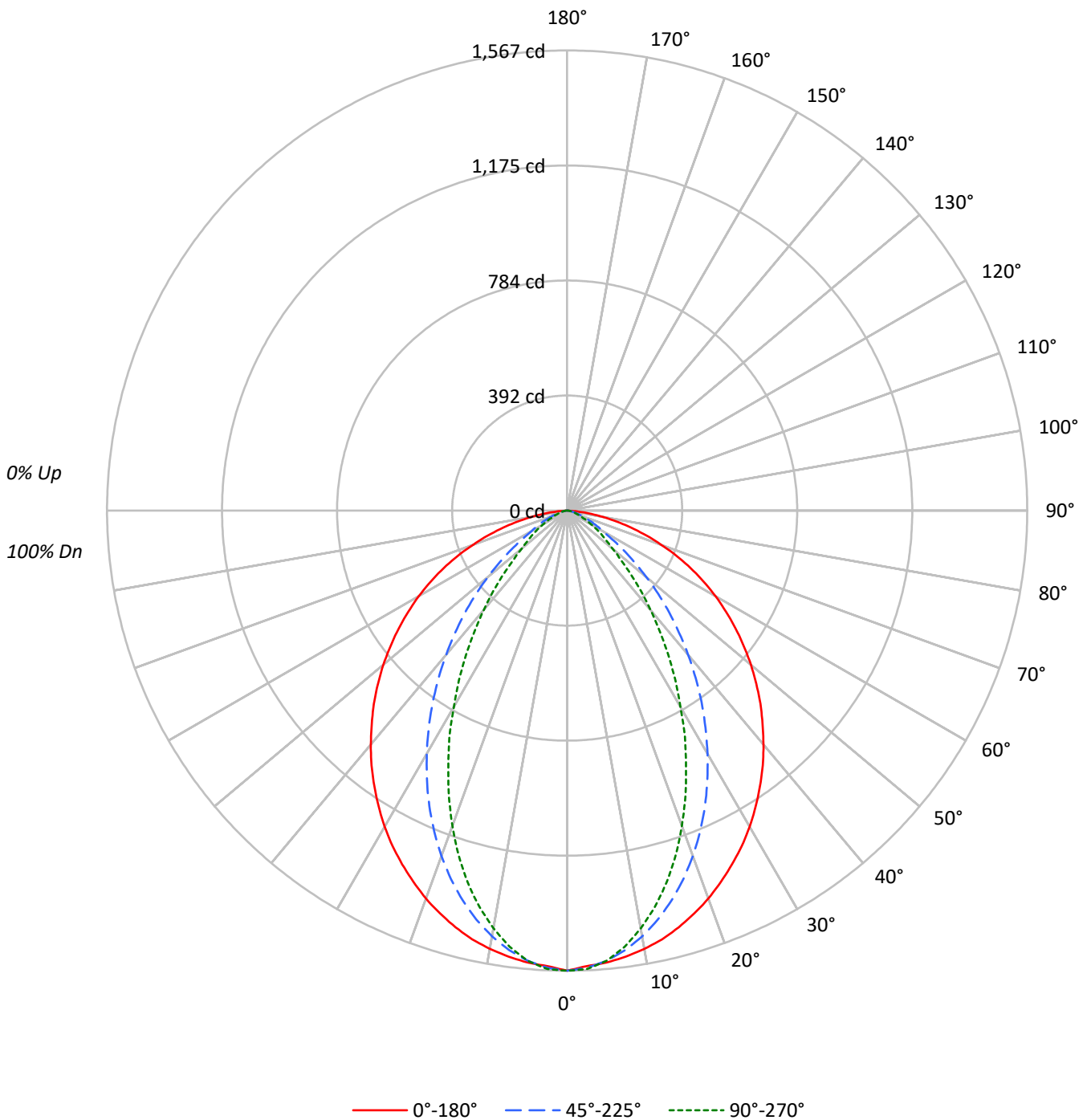
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2533.5 lumens  
Efficiency: N/A  
Efficacy: 69.2 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): 36.6  
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	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					100			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89					89			
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78					78			
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68					68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60					60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48					48			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37					37			
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34					34			

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

	0°	45°	90°
0°	13853	13853	13853
5°	13712	13660	13660
10°	13609	13215	12967
15°	13447	12579	11992
20°	13233	11777	10748
25°	12965	10830	9336
30°	12690	9756	7864
35°	12361	8613	6472
40°	12006	7391	5101
45°	11638	6147	3812
50°	11238	4836	2789
55°	10795	3576	2226
60°	10320	2477	1703
65°	9705	1923	1251
70°	8787	1357	980
75°	7676	946	748
80°	6166	743	667
85°	3408	588	588

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11638 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.3	5.7
10°-20°	388.3	15.3
20°-30°	517.9	20.4
30°-40°	521.5	20.6
40°-50°	427.7	16.9
50°-60°	292.3	11.5
60°-70°	163.3	6.4
70°-80°	64.8	2.6
80°-90°	12.3	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°	1051.6	41.5
0°-40°	1573.1	62.1
0°-60°	2293.1	90.5
0°-90°	2533.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2533.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1567	1567	1567	1567	1567	
5°	1545	1562	1539	1532	1539	147
15°	1469	1453	1374	1326	1310	414
25°	1329	1263	1110	998	957	612
35°	1145	1024	798	646	600	716
45°	931	760	492	346	305	717
55°	700	492	232	155	144	626
65°	464	233	92	66	60	458
75°	225	61	28	23	22	241
85°	34	6	6	6	6	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1566.8	1566.8	1566.8	1566.8	1566.8
2.5°	1552.3	1571.2	1558.1	1559.5	1562.5
5°	1545.0	1562.5	1539.1	1531.8	1539.1
7.5°	1531.8	1545.0	1509.9	1495.4	1498.3
10°	1515.8	1520.2	1472.0	1447.2	1444.3
12.5°	1495.4	1489.5	1426.8	1390.3	1381.6
15°	1469.1	1453.0	1374.3	1326.1	1310.1
17.5°	1438.5	1410.7	1315.9	1253.2	1229.8
20°	1406.4	1365.5	1251.7	1171.5	1142.3
22.5°	1368.4	1317.4	1183.2	1085.4	1051.9
25°	1329.0	1263.4	1110.2	997.9	957.0
27.5°	1288.2	1208.0	1034.3	908.9	868.0
30°	1243.0	1148.1	955.6	819.9	770.3
32.5°	1194.8	1086.9	876.8	732.4	685.7
35°	1145.2	1024.1	798.0	646.3	599.6
37.5°	1094.2	959.9	719.2	564.6	517.9
40°	1040.2	894.3	640.4	487.3	442.0
42.5°	984.7	827.2	564.6	414.3	372.0
45°	930.8	760.1	491.6	345.8	304.9
47.5°	873.9	693.0	420.2	281.6	246.6
50°	817.0	625.9	351.6	226.1	202.8
52.5°	758.6	558.8	288.9	185.3	169.2
55°	700.3	491.6	232.0	154.6	144.4
57.5°	641.9	424.5	179.4	131.3	119.6
60°	583.6	358.9	140.1	106.5	96.3
62.5°	523.7	293.2	115.3	84.6	75.9
65°	463.9	233.4	91.9	65.6	59.8
67.5°	404.1	178.0	70.0	51.1	46.7
70°	339.9	126.9	52.5	39.4	37.9
72.5°	284.5	86.1	37.9	30.6	29.2
75°	224.7	61.3	27.7	23.3	21.9
77.5°	173.6	39.4	20.4	19.0	17.5
80°	121.1	21.9	14.6	13.1	13.1
82.5°	74.4	11.7	10.2	8.8	8.8
85°	33.6	5.8	5.8	5.8	5.8
87.5°	5.8	2.9	2.9	2.9	2.9
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	19.86	21.26	20.22	21.58	21.89	10.95	12.35	11.31	12.67	12.98
	3H	21.44	22.69	21.82	23.02	23.39	11.54	12.79	11.92	13.12	13.48
	4H	22.04	23.21	22.44	23.56	23.94	11.70	12.86	12.10	13.21	13.60
	6H	22.47	23.54	22.88	23.91	24.31	11.80	12.88	12.22	13.25	13.64
	8H	22.58	23.60	23.01	23.99	24.40	11.82	12.84	12.25	13.23	13.64
	12H	22.62	23.60	23.06	23.98	24.41	11.83	12.81	12.26	13.19	13.62
4H	2H	19.71	20.88	20.11	21.23	21.61	11.53	12.70	11.93	13.05	13.43
	3H	21.36	22.32	21.77	22.72	23.12	12.24	13.20	12.65	13.60	14.01
	4H	21.96	22.82	22.40	23.24	23.68	12.45	13.30	12.88	13.72	14.16
	6H	22.46	23.20	22.92	23.64	24.11	12.61	13.35	13.07	13.80	14.26
	8H	22.60	23.29	23.07	23.74	24.21	12.64	13.34	13.11	13.78	14.25
	12H	22.67	23.29	23.16	23.77	24.24	12.67	13.28	13.15	13.76	14.24
8H	4H	21.86	22.55	22.32	22.99	23.46	12.72	13.41	13.18	13.85	14.32
	6H	22.34	22.90	22.84	23.40	23.88	12.92	13.49	13.42	13.98	14.46
	8H	22.48	22.99	23.00	23.50	23.99	12.98	13.49	13.50	14.00	14.49
	12H	22.57	23.02	23.09	23.52	24.08	13.04	13.49	13.55	13.98	14.55
12H	4H	21.82	22.43	22.30	22.91	23.39	12.74	13.36	13.23	13.84	14.31
	6H	22.28	22.79	22.80	23.31	23.80	12.95	13.46	13.47	13.97	14.46
	8H	22.45	22.90	22.96	23.39	23.96	13.04	13.49	13.56	13.99	14.55