

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: P1056056

Luminaire Tested: S124R3DR-S575D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056056  
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-S575D940-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

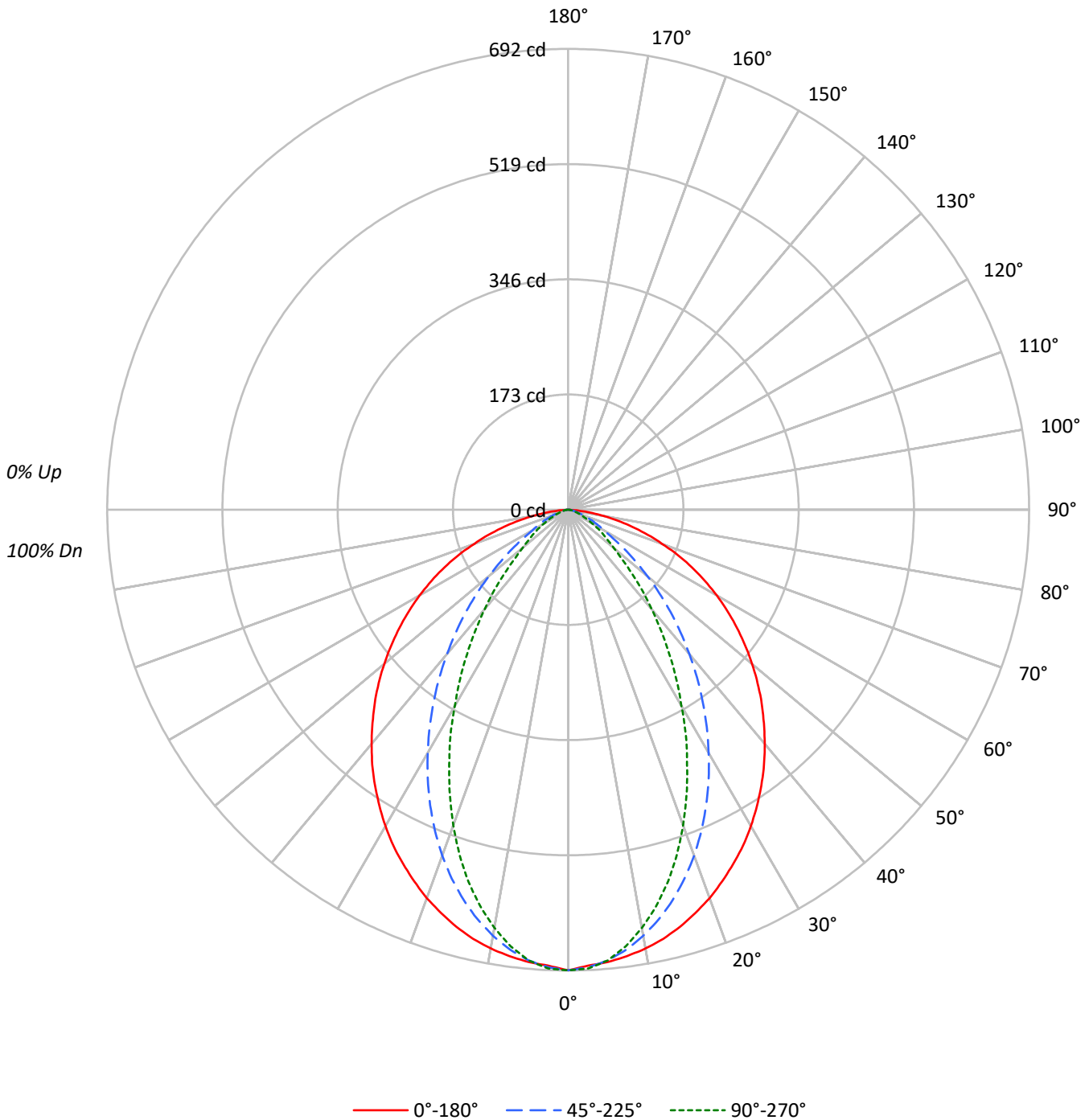
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1118.3 lumens  
Efficiency: N/A  
Efficacy: 58.5 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): 19.1  
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°	6115	6115	6115
5°	6052	6030	6030
10°	6007	5833	5723
15°	5936	5552	5293
20°	5841	5198	4744
25°	5723	4780	4121
30°	5601	4306	3471
35°	5456	3801	2857
40°	5299	3263	2252
45°	5136	2713	1683
50°	4960	2135	1231
55°	4765	1578	983
60°	4555	1093	752
65°	4285	849	552
70°	3878	600	432
75°	3389	417	331
80°	2719	326	295
85°	1501	264	264

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5136 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.1	5.7
10°-20°	171.4	15.3
20°-30°	228.6	20.4
30°-40°	230.2	20.6
40°-50°	188.8	16.9
50°-60°	129.0	11.5
60°-70°	72.1	6.4
70°-80°	28.6	2.6
80°-90°	5.4	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°	464.2	41.5
0°-40°	694.4	62.1
0°-60°	1012.2	90.5
0°-90°	1118.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1118.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	692	692	692	692	692	
5°	682	690	679	676	679	65
15°	648	641	607	585	578	183
25°	587	558	490	440	422	270
35°	506	452	352	285	265	316
45°	411	336	217	153	135	317
55°	309	217	102	68	64	276
65°	205	103	41	29	26	202
75°	99	27	12	10	10	106
85°	15	3	3	3	3	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	691.6	691.6	691.6	691.6	691.6
2.5°	685.2	693.5	687.7	688.4	689.7
5°	681.9	689.7	679.4	676.1	679.4
7.5°	676.1	681.9	666.5	660.0	661.3
10°	669.1	671.0	649.7	638.8	637.5
12.5°	660.0	657.5	629.8	613.7	609.8
15°	648.5	641.4	606.6	585.3	578.3
17.5°	634.9	622.7	580.8	553.1	542.8
20°	620.8	602.7	552.5	517.1	504.2
22.5°	604.0	581.5	522.2	479.1	464.3
25°	586.6	557.7	490.0	440.5	422.4
27.5°	568.6	533.2	456.6	401.2	383.1
30°	548.6	506.8	421.8	361.9	340.0
32.5°	527.4	479.7	387.0	323.3	302.7
35°	505.5	452.0	352.2	285.3	264.7
37.5°	483.0	423.7	317.5	249.2	228.6
40°	459.1	394.7	282.7	215.1	195.1
42.5°	434.7	365.1	249.2	182.9	164.2
45°	410.8	335.5	217.0	152.6	134.6
47.5°	385.7	305.9	185.5	124.3	108.8
50°	360.6	276.3	155.2	99.8	89.5
52.5°	334.9	246.6	127.5	81.8	74.7
55°	309.1	217.0	102.4	68.3	63.8
57.5°	283.3	187.4	79.2	58.0	52.8
60°	257.6	158.4	61.8	47.0	42.5
62.5°	231.2	129.4	50.9	37.3	33.5
65°	204.8	103.0	40.6	29.0	26.4
67.5°	178.4	78.6	30.9	22.5	20.6
70°	150.0	56.0	23.2	17.4	16.7
72.5°	125.6	38.0	16.7	13.5	12.9
75°	99.2	27.0	12.2	10.3	9.7
77.5°	76.6	17.4	9.0	8.4	7.7
80°	53.4	9.7	6.4	5.8	5.8
82.5°	32.8	5.2	4.5	3.9	3.9
85°	14.8	2.6	2.6	2.6	2.6
87.5°	2.6	1.3	1.3	1.3	1.3
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	17.01	18.42	17.38	18.73	19.05	8.11	9.52	8.47	9.83	10.14
	3H	18.60	19.85	18.98	20.18	20.55	8.70	9.95	9.08	10.28	10.64
	4H	19.20	20.36	19.60	20.71	21.10	8.86	10.03	9.26	10.38	10.76
	6H	19.63	20.70	20.04	21.07	21.46	8.96	10.04	9.38	10.41	10.80
	8H	19.74	20.76	20.17	21.15	21.55	8.98	10.00	9.41	10.40	10.80
	12H	19.78	20.76	20.21	21.14	21.57	8.99	9.97	9.42	10.35	10.78
4H	2H	16.87	18.04	17.27	18.39	18.77	8.69	9.86	9.09	10.21	10.59
	3H	18.52	19.48	18.93	19.88	20.28	9.40	10.36	9.81	10.76	11.17
	4H	19.12	19.98	19.56	20.40	20.84	9.61	10.47	10.04	10.88	11.32
	6H	19.61	20.36	20.08	20.80	21.27	9.77	10.52	10.23	10.96	11.42
	8H	19.76	20.45	20.22	20.89	21.36	9.81	10.50	10.27	10.95	11.41
	12H	19.83	20.44	20.31	20.92	21.40	9.83	10.45	10.32	10.93	11.40
8H	4H	19.02	19.71	19.48	20.15	20.62	9.88	10.57	10.34	11.02	11.48
	6H	19.50	20.06	20.00	20.56	21.04	10.08	10.65	10.58	11.14	11.62
	8H	19.64	20.15	20.16	20.66	21.15	10.14	10.65	10.66	11.16	11.65
	12H	19.73	20.18	20.24	20.67	21.24	10.20	10.65	10.71	11.14	11.71
12H	4H	18.98	19.59	19.46	20.07	20.54	9.90	10.52	10.39	11.00	11.47
	6H	19.44	19.95	19.96	20.46	20.95	10.11	10.62	10.63	11.13	11.62
	8H	19.61	20.05	20.12	20.55	21.12	10.20	10.65	10.72	11.15	11.72