

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056194

Luminaire Tested: S124R3DR-H575D950-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056194  
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-H575D950-X4F0-XX-UDD-FLL-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

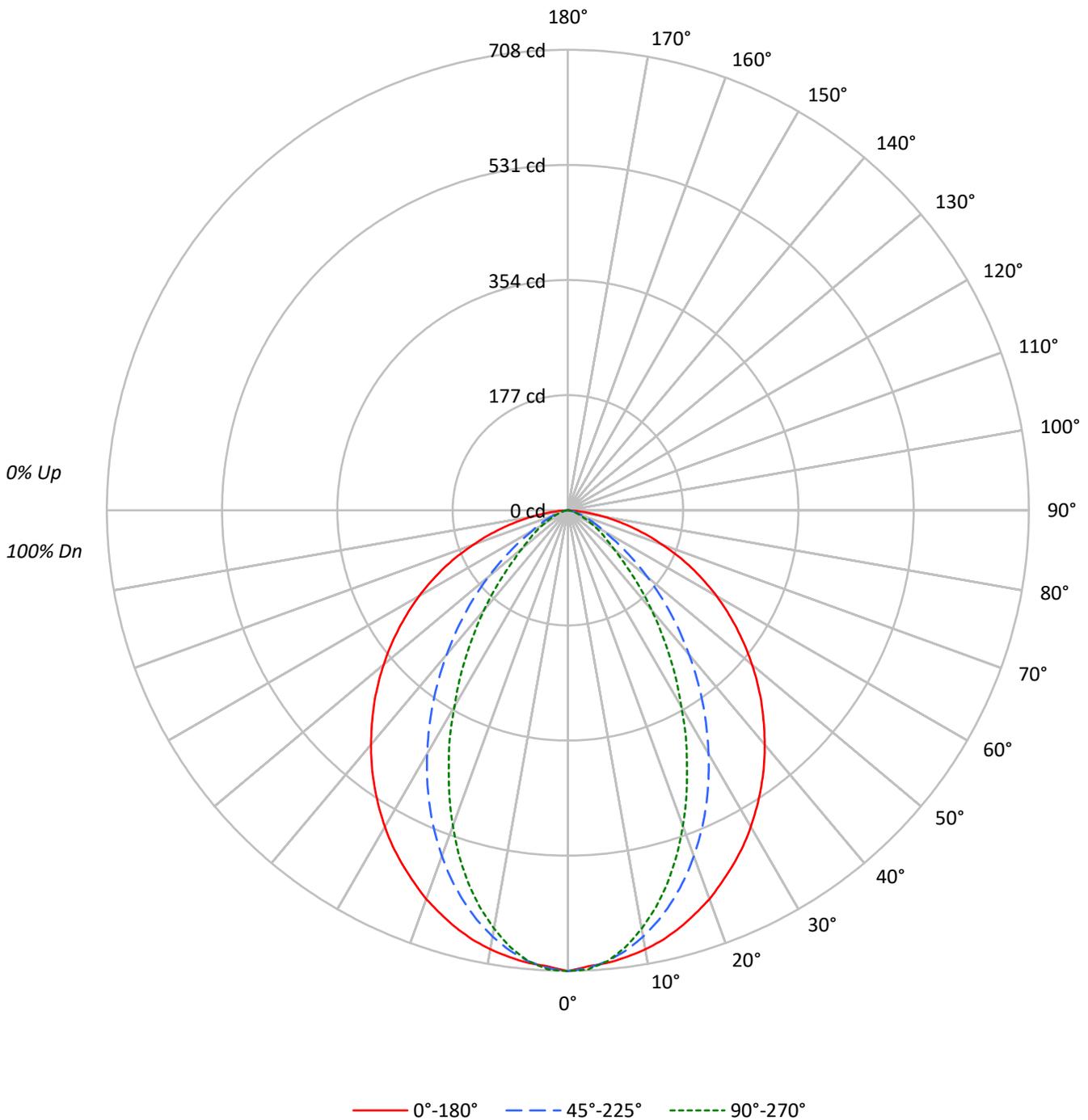
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1145.5 lumens  
Efficiency: N/A  
Efficacy: 66.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.3  
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°	6264	6264	6264
5°	6200	6176	6176
10°	6153	5976	5862
15°	6081	5688	5422
20°	5983	5325	4860
25°	5862	4897	4221
30°	5738	4411	3556
35°	5589	3894	2926
40°	5428	3342	2307
45°	5263	2780	1724
50°	5081	2187	1261
55°	4880	1617	1007
60°	4666	1119	769
65°	4389	870	565
70°	3973	613	445
75°	3471	427	338
80°	2790	336	300
85°	1542	264	264

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5263 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.7	5.7
10°-20°	175.6	15.3
20°-30°	234.2	20.4
30°-40°	235.8	20.6
40°-50°	193.4	16.9
50°-60°	132.2	11.5
60°-70°	73.9	6.4
70°-80°	29.3	2.6
80°-90°	5.5	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°	475.5	41.5
0°-40°	711.3	62.1
0°-60°	1036.8	90.5
0°-90°	1145.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1145.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	699	706	696	693	696	66
15°	664	657	621	600	592	187
25°	601	571	502	451	433	277
35°	518	463	361	292	271	324
45°	421	344	222	156	138	324
55°	317	222	105	70	65	283
65°	210	106	42	30	27	207
75°	102	28	12	11	10	109
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°	708.5	708.5	708.5	708.5	708.5
2.5°	701.9	710.4	704.5	705.2	706.5
5°	698.6	706.5	695.9	692.6	695.9
7.5°	692.6	698.6	682.7	676.1	677.5
10°	685.4	687.3	665.6	654.4	653.0
12.5°	676.1	673.5	645.1	628.6	624.7
15°	664.3	657.0	621.4	599.6	592.4
17.5°	650.4	637.9	595.0	566.6	556.1
20°	635.9	617.4	566.0	529.7	516.5
22.5°	618.7	595.7	535.0	490.8	475.6
25°	600.9	571.3	502.0	451.2	432.7
27.5°	582.5	546.2	467.7	411.0	392.5
30°	562.0	519.1	432.1	370.7	348.3
32.5°	540.2	491.4	396.4	331.1	310.0
35°	517.8	463.1	360.8	292.2	271.1
37.5°	494.7	434.0	325.2	255.3	234.2
40°	470.3	404.4	289.6	220.3	199.9
42.5°	445.3	374.0	255.3	187.3	168.2
45°	420.9	343.7	222.3	156.3	137.9
47.5°	395.1	313.3	190.0	127.3	111.5
50°	369.4	283.0	159.0	102.2	91.7
52.5°	343.0	252.6	130.6	83.8	76.5
55°	316.6	222.3	104.9	69.9	65.3
57.5°	290.2	192.0	81.1	59.4	54.1
60°	263.9	162.3	63.3	48.2	43.5
62.5°	236.8	132.6	52.1	38.3	34.3
65°	209.8	105.5	41.6	29.7	27.0
67.5°	182.7	80.5	31.7	23.1	21.1
70°	153.7	57.4	23.7	17.8	17.2
72.5°	128.6	38.9	17.2	13.9	13.2
75°	101.6	27.7	12.5	10.6	9.9
77.5°	78.5	17.8	9.2	8.6	7.9
80°	54.8	9.9	6.6	5.9	5.9
82.5°	33.6	5.3	4.6	4.0	4.0
85°	15.2	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	17.10	18.51	17.46	18.82	19.13	8.19	9.60	8.56	9.91	10.23
	3H	18.69	19.94	19.06	20.27	20.63	8.78	10.04	9.16	10.36	10.73
	4H	19.28	20.45	19.68	20.80	21.18	8.94	10.11	9.34	10.46	10.84
	6H	19.71	20.79	20.13	21.16	21.55	9.05	10.12	9.46	10.49	10.88
	8H	19.83	20.85	20.25	21.24	21.64	9.07	10.09	9.50	10.48	10.88
	12H	19.87	20.84	20.30	21.23	21.66	9.08	10.05	9.51	10.43	10.86
4H	2H	16.95	18.12	17.36	18.47	18.85	8.78	9.94	9.18	10.29	10.68
	3H	18.60	19.56	19.01	19.96	20.36	9.49	10.45	9.90	10.85	11.25
	4H	19.21	20.06	19.64	20.48	20.92	9.69	10.55	10.13	10.97	11.41
	6H	19.70	20.44	20.16	20.89	21.35	9.86	10.60	10.32	11.05	11.51
	8H	19.84	20.53	20.31	20.98	21.45	9.89	10.58	10.36	11.03	11.50
	12H	19.91	20.53	20.40	21.01	21.48	9.92	10.53	10.40	11.01	11.48
8H	4H	19.10	19.79	19.57	20.24	20.71	9.96	10.66	10.43	11.10	11.57
	6H	19.58	20.15	20.08	20.64	21.12	10.17	10.73	10.67	11.23	11.71
	8H	19.73	20.23	20.24	20.75	21.24	10.22	10.73	10.74	11.25	11.74
	12H	19.82	20.26	20.33	20.76	21.33	10.28	10.73	10.80	11.23	11.79
12H	4H	19.06	19.67	19.55	20.16	20.63	9.99	10.60	10.48	11.09	11.56
	6H	19.53	20.04	20.05	20.55	21.04	10.19	10.70	10.71	11.22	11.71
	8H	19.69	20.14	20.20	20.63	21.20	10.29	10.74	10.80	11.23	11.80