

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: P1056212

Luminaire Tested: S124R3DR-H795D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056212  
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-H795D930-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

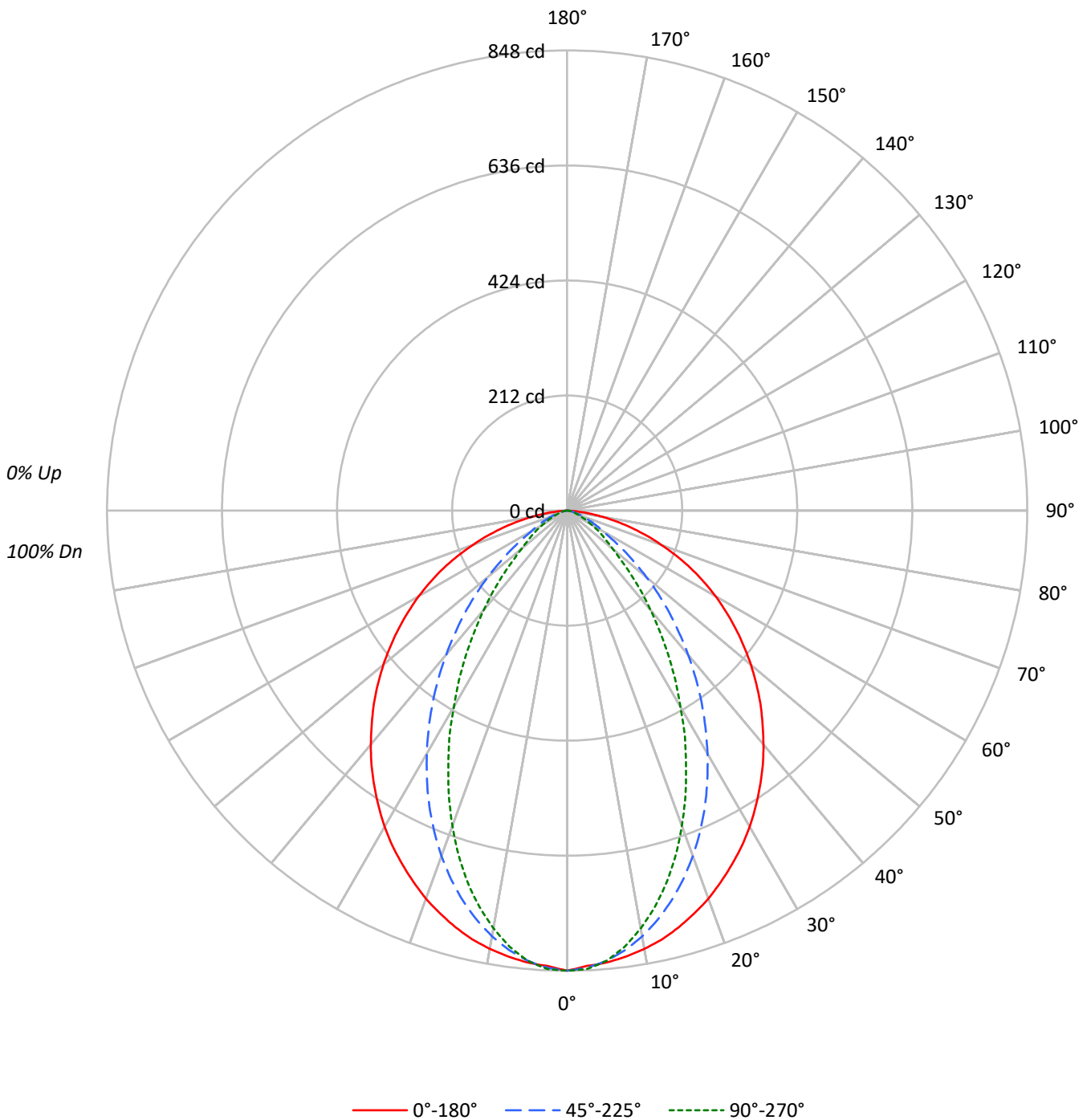
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1371.1 lumens  
Efficiency: N/A  
Efficacy: 57.6 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): 23.8  
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°	7497	7497	7497
5°	7421	7392	7392
10°	7364	7152	7017
15°	7277	6807	6490
20°	7161	6374	5817
25°	7016	5861	5052
30°	6868	5279	4256
35°	6690	4662	3502
40°	6497	4000	2761
45°	6298	3327	2063
50°	6081	2618	1509
55°	5842	1935	1205
60°	5584	1340	921
65°	5253	1040	678
70°	4756	734	530
75°	4154	512	403
80°	3335	402	361
85°	1846	325	325

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6298 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.6	5.7
10°-20°	210.2	15.3
20°-30°	280.3	20.4
30°-40°	282.2	20.6
40°-50°	231.4	16.9
50°-60°	158.2	11.5
60°-70°	88.4	6.4
70°-80°	35.1	2.6
80°-90°	6.7	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°	569.1	41.5
0°-40°	851.3	62.1
0°-60°	1241.0	90.5
0°-90°	1371.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1371.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	836	846	833	829	833	79
15°	795	786	744	718	709	224
25°	719	684	601	540	518	331
35°	620	554	432	350	324	388
45°	504	411	266	187	165	388
55°	379	266	126	84	78	339
65°	251	126	50	36	32	248
75°	122	33	15	13	12	130
85°	18	3	3	3	3	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	847.9	847.9	847.9	847.9	847.9
2.5°	840.0	850.3	843.2	844.0	845.6
5°	836.1	845.6	832.9	829.0	832.9
7.5°	829.0	836.1	817.1	809.2	810.8
10°	820.3	822.7	796.6	783.2	781.6
12.5°	809.2	806.1	772.1	752.4	747.7
15°	795.0	786.4	743.7	717.7	709.0
17.5°	778.5	763.5	712.1	678.2	665.6
20°	761.1	739.0	677.4	634.0	618.2
22.5°	740.6	712.9	640.3	587.4	569.2
25°	719.2	683.7	600.8	540.0	517.9
27.5°	697.1	653.7	559.8	491.9	469.8
30°	672.7	621.3	517.1	443.7	416.9
32.5°	646.6	588.2	474.5	396.3	371.1
35°	619.8	554.2	431.9	349.8	324.5
37.5°	592.1	519.5	389.2	305.5	280.3
40°	562.9	484.0	346.6	263.7	239.2
42.5°	532.9	447.7	305.5	224.2	201.3
45°	503.7	411.3	266.1	187.1	165.0
47.5°	472.9	375.0	227.4	152.4	133.4
50°	442.1	338.7	190.3	122.4	109.7
52.5°	410.5	302.4	156.3	100.3	91.6
55°	379.0	266.1	125.5	83.7	78.2
57.5°	347.4	229.7	97.1	71.1	64.7
60°	315.8	194.2	75.8	57.6	52.1
62.5°	283.4	158.7	62.4	45.8	41.1
65°	251.1	126.3	49.7	35.5	32.4
67.5°	218.7	96.3	37.9	27.6	25.3
70°	184.0	68.7	28.4	21.3	20.5
72.5°	154.0	46.6	20.5	16.6	15.8
75°	121.6	33.2	15.0	12.6	11.8
77.5°	94.0	21.3	11.1	10.3	9.5
80°	65.5	11.8	7.9	7.1	7.1
82.5°	40.3	6.3	5.5	4.7	4.7
85°	18.2	3.2	3.2	3.2	3.2
87.5°	3.2	1.6	1.6	1.6	1.6
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	17.72	19.13	18.09	19.44	19.76	8.82	10.22	9.18	10.54	10.85
	3H	19.31	20.56	19.69	20.89	21.25	9.41	10.66	9.79	10.99	11.35
	4H	19.90	21.07	20.31	21.42	21.80	9.56	10.73	9.96	11.08	11.46
	6H	20.34	21.41	20.75	21.78	22.17	9.67	10.75	10.08	11.11	11.51
	8H	20.45	21.47	20.88	21.86	22.26	9.69	10.71	10.12	11.10	11.50
	12H	20.49	21.47	20.92	21.85	22.28	9.70	10.67	10.13	11.06	11.49
4H	2H	17.58	18.74	17.98	19.09	19.48	9.40	10.57	9.80	10.92	11.30
	3H	19.22	20.18	19.64	20.59	20.99	10.11	11.07	10.52	11.47	11.87
	4H	19.83	20.69	20.26	21.11	21.55	10.31	11.17	10.75	11.59	12.03
	6H	20.32	21.06	20.78	21.51	21.97	10.48	11.22	10.94	11.67	12.13
	8H	20.47	21.16	20.93	21.60	22.07	10.51	11.20	10.98	11.65	12.12
	12H	20.54	21.15	21.02	21.63	22.11	10.54	11.15	11.02	11.63	12.10
8H	4H	19.72	20.42	20.19	20.86	21.33	10.58	11.28	11.05	11.72	12.19
	6H	20.20	20.77	20.71	21.27	21.75	10.79	11.35	11.29	11.85	12.33
	8H	20.35	20.86	20.87	21.37	21.86	10.84	11.35	11.36	11.87	12.36
	12H	20.44	20.89	20.95	21.38	21.95	10.90	11.35	11.42	11.85	12.42
12H	4H	19.68	20.30	20.17	20.78	21.25	10.61	11.22	11.10	11.71	12.18
	6H	20.15	20.66	20.67	21.17	21.66	10.82	11.33	11.34	11.84	12.33
	8H	20.31	20.76	20.83	21.26	21.83	10.91	11.36	11.42	11.85	12.42