

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: P1056041

Luminaire Tested: S124R3DR-S575D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056041  
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-S575D840-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, 80 CRI LEDS  
Ballast/Driver: -

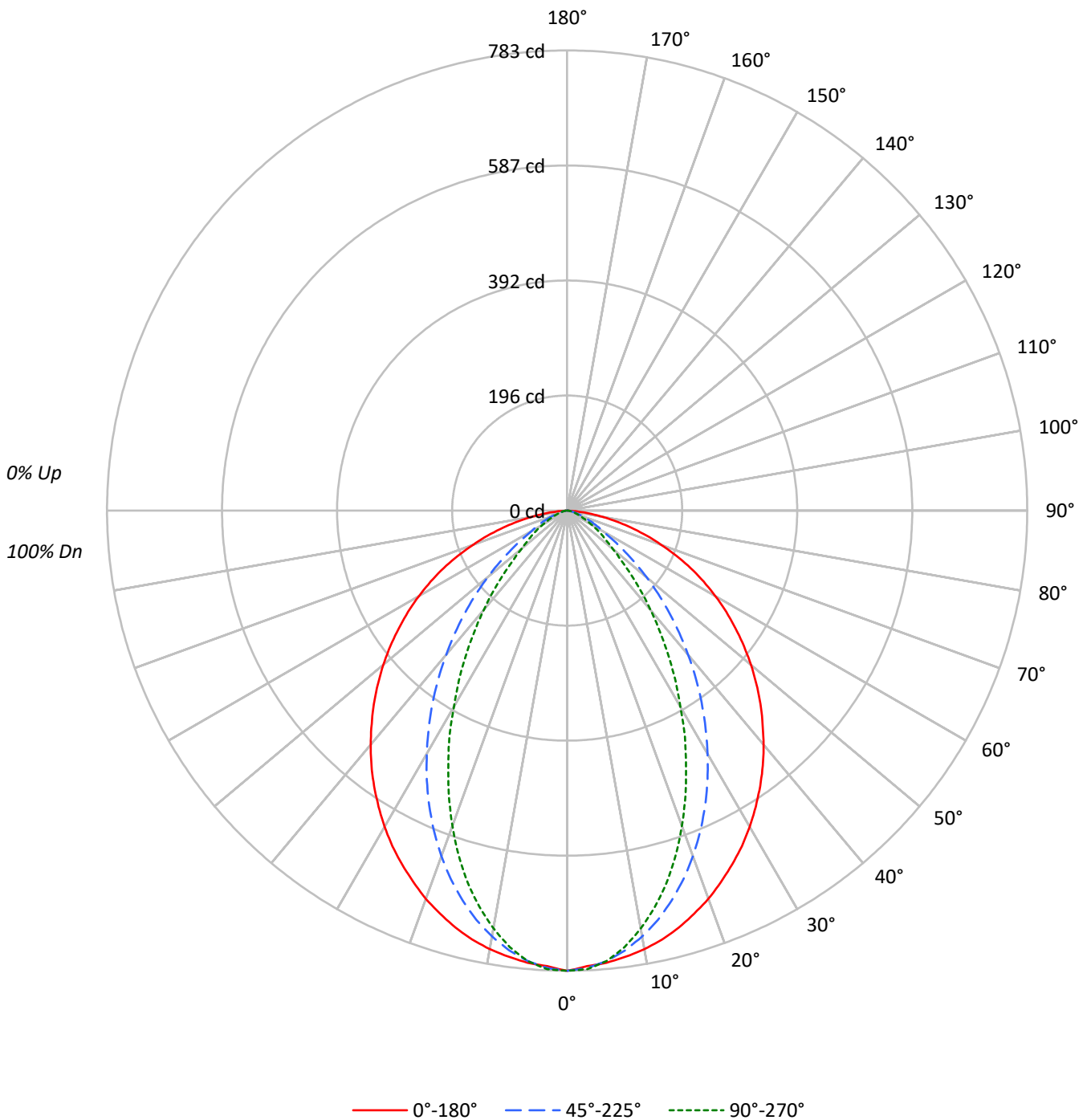
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1266.4 lumens  
Efficiency: N/A  
Efficacy: 66.3 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 (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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35

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

	0°	45°	90°
0°	6925	6925	6925
5°	6854	6829	6829
10°	6802	6606	6482
15°	6722	6288	5994
20°	6614	5887	5372
25°	6481	5414	4667
30°	6343	4877	3932
35°	6179	4305	3235
40°	6002	3694	2551
45°	5818	3073	1906
50°	5617	2418	1395
55°	5395	1788	1113
60°	5158	1238	851
65°	4851	960	626
70°	4392	680	491
75°	3836	475	372
80°	3080	372	336
85°	1704	294	294

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5818 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.6	5.7
10°-20°	194.1	15.3
20°-30°	258.9	20.4
30°-40°	260.7	20.6
40°-50°	213.8	16.9
50°-60°	146.1	11.5
60°-70°	81.7	6.4
70°-80°	32.4	2.6
80°-90°	6.2	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°	525.7	41.5
0°-40°	786.4	62.1
0°-60°	1146.3	90.5
0°-90°	1266.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1266.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	772	781	769	766	769	73
15°	734	726	687	663	655	207
25°	664	632	555	499	478	306
35°	572	512	399	323	300	358
45°	465	380	246	173	152	359
55°	350	246	116	77	72	313
65°	232	117	46	33	30	229
75°	112	31	14	12	11	120
85°	17	3	3	3	3	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	783.2	783.2	783.2	783.2	783.2
2.5°	775.9	785.4	778.9	779.6	781.0
5°	772.3	781.0	769.4	765.7	769.4
7.5°	765.7	772.3	754.8	747.5	749.0
10°	757.7	759.9	735.8	723.4	722.0
12.5°	747.5	744.6	713.2	695.0	690.6
15°	734.4	726.4	687.0	662.9	654.9
17.5°	719.1	705.2	657.8	626.4	614.8
20°	703.0	682.6	625.7	585.6	571.0
22.5°	684.1	658.5	591.4	542.6	525.8
25°	664.4	631.5	555.0	498.8	478.4
27.5°	643.9	603.8	517.1	454.3	433.9
30°	621.3	573.9	477.7	409.8	385.1
32.5°	597.3	543.3	438.3	366.1	342.8
35°	572.5	511.9	398.9	323.1	299.7
37.5°	547.0	479.9	359.5	282.2	258.9
40°	520.0	447.0	320.1	243.6	221.0
42.5°	492.3	413.5	282.2	207.1	186.0
45°	465.3	379.9	245.8	172.8	152.4
47.5°	436.8	346.4	210.0	140.7	123.2
50°	408.4	312.9	175.8	113.0	101.4
52.5°	379.2	279.3	144.4	92.6	84.6
55°	350.0	245.8	116.0	77.3	72.2
57.5°	320.9	212.2	89.7	65.6	59.8
60°	291.7	179.4	70.0	53.2	48.1
62.5°	261.8	146.6	57.6	42.3	37.9
65°	231.9	116.7	45.9	32.8	29.9
67.5°	202.0	89.0	35.0	25.5	23.3
70°	169.9	63.4	26.3	19.7	19.0
72.5°	142.2	43.0	19.0	15.3	14.6
75°	112.3	30.6	13.9	11.7	10.9
77.5°	86.8	19.7	10.2	9.5	8.8
80°	60.5	10.9	7.3	6.6	6.6
82.5°	37.2	5.8	5.1	4.4	4.4
85°	16.8	2.9	2.9	2.9	2.9
87.5°	2.9	1.5	1.5	1.5	1.5
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	17.45	18.85	17.81	19.17	19.48	8.53	9.94	8.90	10.25	10.57
	3H	19.03	20.28	19.41	20.61	20.98	9.13	10.38	9.50	10.71	11.07
	4H	19.63	20.80	20.03	21.15	21.53	9.28	10.45	9.68	10.80	11.18
	6H	20.06	21.13	20.47	21.50	21.90	9.39	10.47	9.81	10.84	11.23
	8H	20.17	21.19	20.60	21.58	21.99	9.41	10.43	9.84	10.82	11.23
	12H	20.22	21.19	20.65	21.57	22.00	9.42	10.40	9.85	10.78	11.21
4H	2H	17.30	18.47	17.70	18.82	19.20	9.12	10.29	9.52	10.64	11.02
	3H	18.95	19.91	19.36	20.31	20.71	9.83	10.79	10.24	11.19	11.59
	4H	19.55	20.41	19.99	20.83	21.27	10.03	10.89	10.47	11.31	11.75
	6H	20.05	20.79	20.51	21.23	21.70	10.20	10.95	10.66	11.39	11.85
	8H	20.19	20.88	20.66	21.33	21.80	10.24	10.93	10.70	11.37	11.84
	12H	20.26	20.88	20.75	21.36	21.83	10.26	10.88	10.75	11.36	11.83
8H	4H	19.45	20.14	19.91	20.59	21.05	10.31	11.00	10.77	11.44	11.91
	6H	19.93	20.50	20.43	20.99	21.47	10.51	11.08	11.01	11.57	12.05
	8H	20.07	20.58	20.59	21.09	21.58	10.57	11.08	11.09	11.59	12.08
	12H	20.16	20.61	20.68	21.11	21.67	10.63	11.08	11.14	11.57	12.14
12H	4H	19.41	20.02	19.89	20.50	20.98	10.33	10.95	10.82	11.43	11.90
	6H	19.87	20.38	20.39	20.90	21.39	10.54	11.05	11.06	11.56	12.05
	8H	20.04	20.49	20.55	20.98	21.55	10.64	11.08	11.15	11.58	12.15