

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: P1056044

Luminaire Tested: S124R3DR-S575D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056044
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-S575D850-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

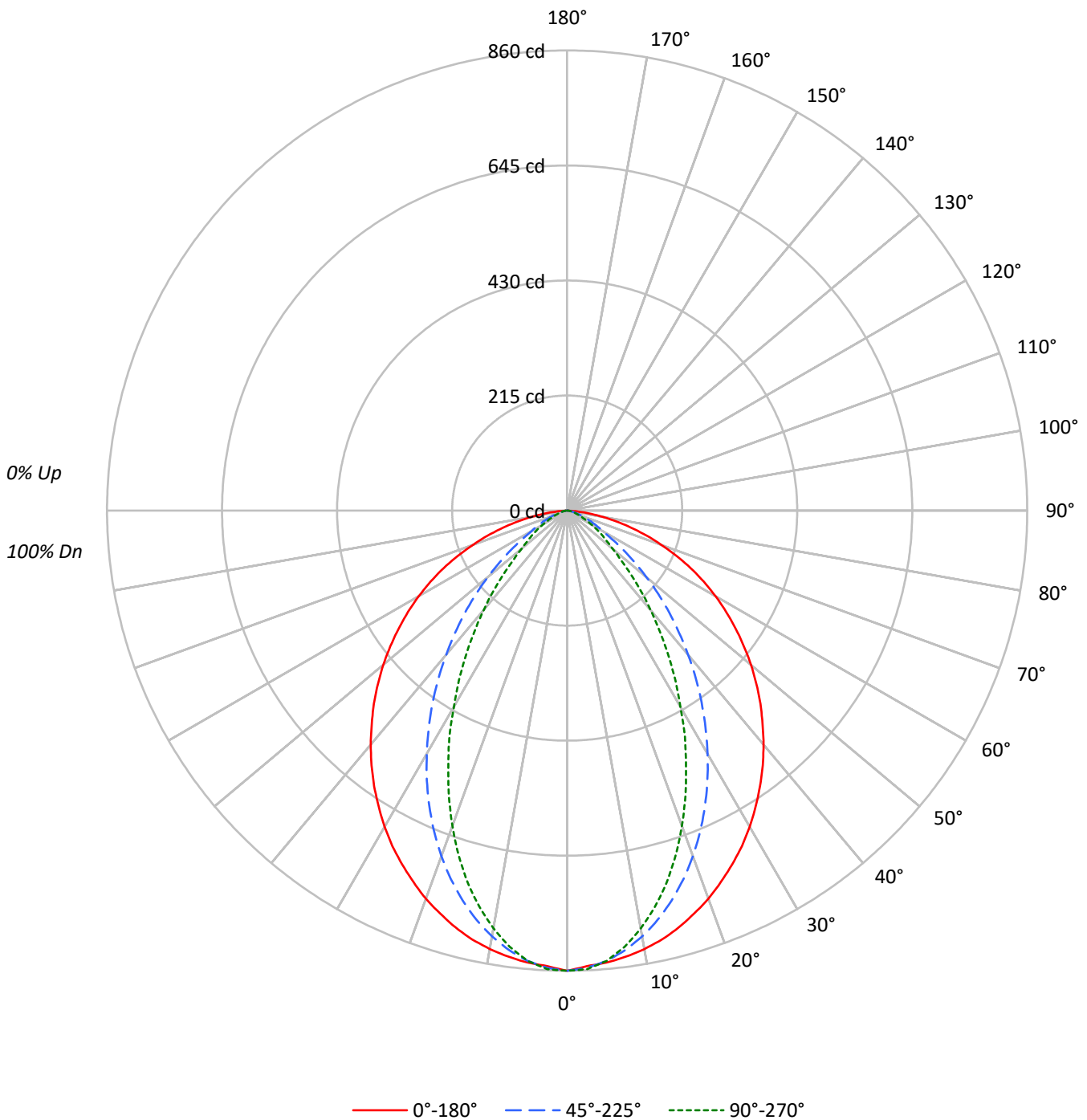
Lumens per Lamp: N/A
Luminaire Lumens: 1390.7 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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	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°	7604	7604	7604
5°	7527	7499	7499
10°	7470	7255	7118
15°	7382	6905	6583
20°	7264	6465	5900
25°	7118	5946	5125
30°	6966	5356	4317
35°	6786	4729	3553
40°	6590	4058	2801
45°	6388	3375	2093
50°	6169	2655	1531
55°	5925	1962	1222
60°	5664	1360	935
65°	5328	1056	686
70°	4824	744	538
75°	4212	519	410
80°	3386	407	367
85°	1867	325	325

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6388 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.8	5.7
10°-20°	213.2	15.3
20°-30°	284.3	20.4
30°-40°	286.3	20.6
40°-50°	234.8	16.9
50°-60°	160.5	11.5
60°-70°	89.7	6.4
70°-80°	35.5	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°	577.3	41.5
0°-40°	863.6	62.1
0°-60°	1258.8	90.5
0°-90°	1390.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1390.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	860	860	860	860	860	
5°	848	858	845	841	845	80
15°	806	798	754	728	719	227
25°	730	694	610	548	525	336
35°	629	562	438	355	329	393
45°	511	417	270	190	167	394
55°	384	270	127	85	79	344
65°	255	128	50	36	33	252
75°	123	34	15	13	12	132
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°	860.1	860.1	860.1	860.1	860.1
2.5°	852.1	862.5	855.3	856.1	857.7
5°	848.1	857.7	844.9	840.9	844.9
7.5°	840.9	848.1	828.9	820.9	822.5
10°	832.1	834.5	808.1	794.4	792.8
12.5°	820.9	817.7	783.2	763.2	758.4
15°	806.5	797.7	754.4	728.0	719.2
17.5°	789.6	774.4	722.4	687.9	675.1
20°	772.0	749.6	687.1	643.1	627.1
22.5°	751.2	723.2	649.5	595.8	577.4
25°	729.6	693.5	609.5	547.8	525.4
27.5°	707.2	663.1	567.8	498.9	476.5
30°	682.3	630.3	524.6	450.1	422.9
32.5°	655.9	596.6	481.3	402.0	376.4
35°	628.7	562.2	438.1	354.8	329.2
37.5°	600.6	527.0	394.8	309.9	284.3
40°	571.0	490.9	351.6	267.5	242.7
42.5°	540.6	454.1	309.9	227.4	204.2
45°	510.9	417.2	269.9	189.8	167.4
47.5°	479.7	380.4	230.6	154.6	135.3
50°	448.5	343.6	193.0	124.1	111.3
52.5°	416.4	306.7	158.6	101.7	92.9
55°	384.4	269.9	127.3	84.9	79.3
57.5°	352.4	233.0	98.5	72.1	65.7
60°	320.3	197.0	76.9	58.5	52.9
62.5°	287.5	161.0	63.3	46.4	41.6
65°	254.7	128.1	50.5	36.0	32.8
67.5°	221.8	97.7	38.4	28.0	25.6
70°	186.6	69.7	28.8	21.6	20.8
72.5°	156.2	47.3	20.8	16.8	16.0
75°	123.3	33.6	15.2	12.8	12.0
77.5°	95.3	21.6	11.2	10.4	9.6
80°	66.5	12.0	8.0	7.2	7.2
82.5°	40.8	6.4	5.6	4.8	4.8
85°	18.4	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	17.77	19.18	18.14	19.49	19.81	8.87	10.27	9.23	10.58	10.90
	3H	19.36	20.61	19.74	20.94	21.30	9.45	10.71	9.83	11.04	11.40
	4H	19.95	21.12	20.35	21.47	21.85	9.61	10.78	10.01	11.13	11.51
	6H	20.38	21.46	20.80	21.83	22.22	9.72	10.79	10.13	11.16	11.56
	8H	20.50	21.52	20.93	21.91	22.31	9.74	10.76	10.17	11.15	11.55
	12H	20.54	21.52	20.97	21.90	22.33	9.75	10.72	10.18	11.10	11.53
4H	2H	17.63	18.79	18.03	19.14	19.53	9.45	10.62	9.85	10.97	11.35
	3H	19.27	20.23	19.69	20.63	21.04	10.16	11.12	10.57	11.52	11.92
	4H	19.88	20.74	20.31	21.16	21.60	10.36	11.22	10.80	11.64	12.08
	6H	20.37	21.11	20.83	21.56	22.02	10.53	11.27	10.99	11.72	12.18
	8H	20.51	21.21	20.98	21.65	22.12	10.56	11.25	11.03	11.70	12.17
	12H	20.59	21.20	21.07	21.68	22.16	10.59	11.20	11.07	11.68	12.15
8H	4H	19.77	20.46	20.24	20.91	21.38	10.63	11.33	11.10	11.77	12.24
	6H	20.25	20.82	20.75	21.32	21.79	10.84	11.40	11.34	11.90	12.38
	8H	20.40	20.91	20.92	21.42	21.91	10.89	11.40	11.41	11.92	12.41
	12H	20.49	20.94	21.00	21.43	22.00	10.95	11.40	11.47	11.90	12.46
12H	4H	19.73	20.35	20.22	20.83	21.30	10.66	11.27	11.15	11.76	12.23
	6H	20.20	20.71	20.72	21.22	21.71	10.87	11.37	11.38	11.89	12.38
	8H	20.36	20.81	20.88	21.31	21.87	10.96	11.41	11.47	11.90	12.47