

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: P1056035

Luminaire Tested: S124R3DR-S575D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056035
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-S575D830-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

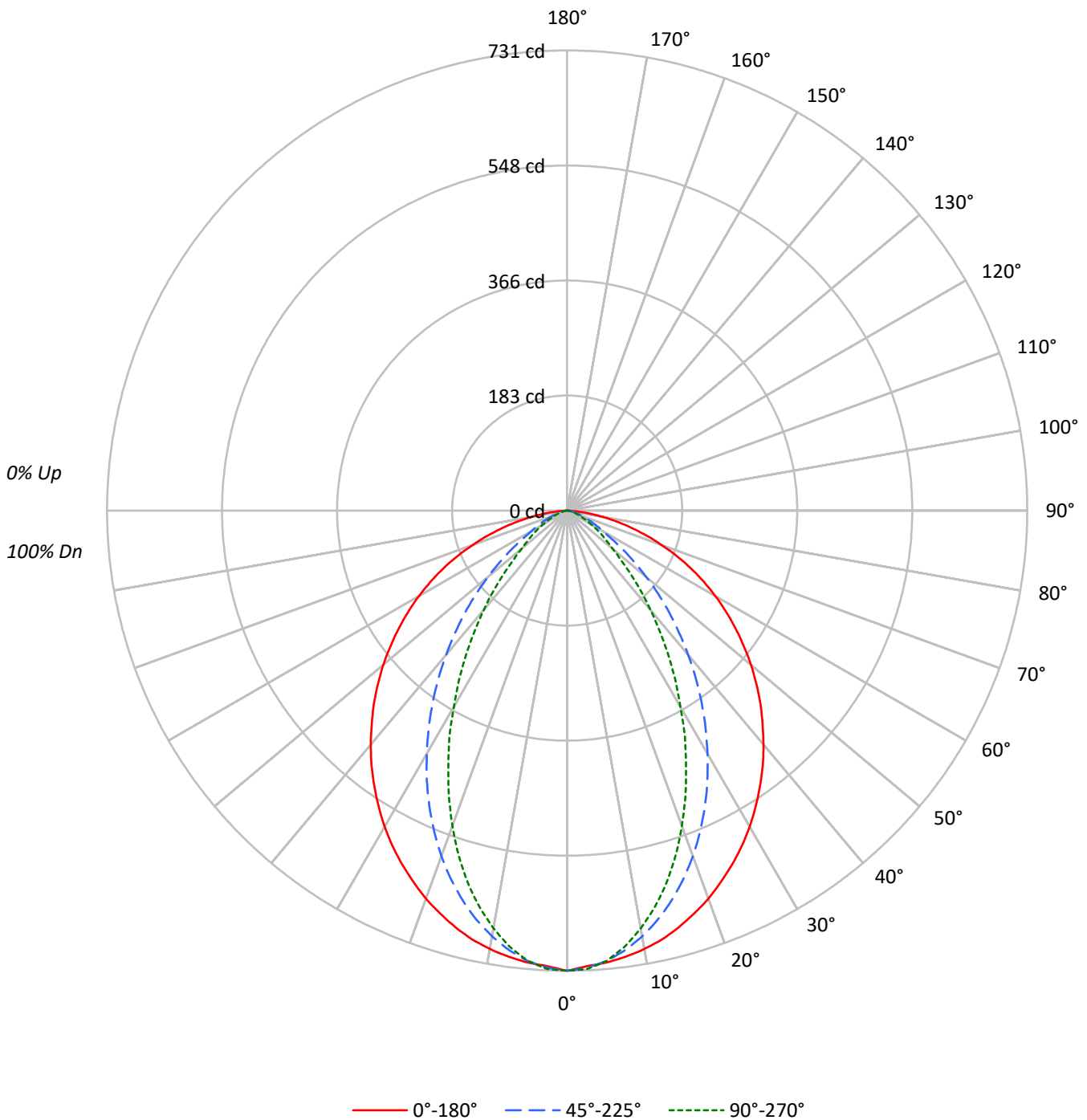
Lumens per Lamp: N/A
Luminaire Lumens: 1182.0 lumens
Efficiency: N/A
Efficacy: 61.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1056035

CATALOG NUMBER: S124R3DR-S575D830-X4F0-XX-UDD-F-S

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°	6463	6463	6463
5°	6397	6373	6373
10°	6349	6166	6049
15°	6274	5869	5594
20°	6173	5495	5014
25°	6049	5053	4356
30°	5920	4551	3669
35°	5767	4018	3019
40°	5601	3449	2380
45°	5430	2868	1779
50°	5243	2256	1301
55°	5036	1668	1039
60°	4815	1155	794
65°	4527	897	584
70°	4100	633	458
75°	3580	441	348
80°	2877	346	311
85°	1593	274	274

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5430 cd/sqm

TEST NUMBER: P1056035

CATALOG NUMBER: S124R3DR-S575D830-X4F0-XX-UDD-F-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.8	5.7
10°-20°	181.2	15.3
20°-30°	241.6	20.4
30°-40°	243.3	20.6
40°-50°	199.5	16.9
50°-60°	136.4	11.5
60°-70°	76.2	6.4
70°-80°	30.2	2.6
80°-90°	5.7	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°	490.6	41.5
0°-40°	733.9	62.1
0°-60°	1069.9	90.5
0°-90°	1182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1182.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	731	731	731	731	731	
5°	721	729	718	715	718	68
15°	685	678	641	619	611	193
25°	620	589	518	466	446	286
35°	534	478	372	302	280	334
45°	434	355	229	161	142	335
55°	327	229	108	72	67	292
65°	216	109	43	31	28	214
75°	105	29	13	11	10	112
85°	16	3	3	3	3	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	731.0	731.0	731.0	731.0	731.0
2.5°	724.2	733.1	726.9	727.6	729.0
5°	720.8	729.0	718.1	714.7	718.1
7.5°	714.7	720.8	704.5	697.7	699.0
10°	707.2	709.2	686.8	675.2	673.8
12.5°	697.7	694.9	665.7	648.7	644.6
15°	685.4	677.9	641.2	618.7	611.2
17.5°	671.1	658.2	613.9	584.7	573.8
20°	656.1	637.1	584.0	546.6	532.9
22.5°	638.5	614.6	552.0	506.4	490.7
25°	620.1	589.4	518.0	465.6	446.5
27.5°	601.0	563.6	482.6	424.0	405.0
30°	579.9	535.7	445.8	382.5	359.4
32.5°	557.5	507.1	409.1	341.7	319.9
35°	534.3	477.8	372.3	301.5	279.7
37.5°	510.5	447.9	335.6	263.4	241.6
40°	485.3	417.2	298.8	227.3	206.2
42.5°	459.4	385.9	263.4	193.3	173.6
45°	434.3	354.6	229.4	161.3	142.3
47.5°	407.7	323.3	196.0	131.4	115.0
50°	381.2	292.0	164.0	105.5	94.6
52.5°	353.9	260.7	134.8	86.4	79.0
55°	326.7	229.4	108.2	72.1	67.4
57.5°	299.5	198.1	83.7	61.3	55.8
60°	272.3	167.4	65.3	49.7	44.9
62.5°	244.4	136.8	53.8	39.5	35.4
65°	216.4	108.9	42.9	30.6	27.9
67.5°	188.5	83.0	32.7	23.8	21.8
70°	158.6	59.2	24.5	18.4	17.7
72.5°	132.7	40.2	17.7	14.3	13.6
75°	104.8	28.6	12.9	10.9	10.2
77.5°	81.0	18.4	9.5	8.8	8.2
80°	56.5	10.2	6.8	6.1	6.1
82.5°	34.7	5.4	4.8	4.1	4.1
85°	15.7	2.7	2.7	2.7	2.7
87.5°	2.7	1.4	1.4	1.4	1.4
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	17.21	18.62	17.57	18.93	19.24	8.30	9.71	8.67	10.02	10.34
	3H	18.79	20.05	19.17	20.37	20.74	8.89	10.14	9.27	10.47	10.84
	4H	19.39	20.56	19.79	20.91	21.29	9.05	10.22	9.45	10.57	10.95
	6H	19.82	20.90	20.23	21.26	21.66	9.16	10.23	9.57	10.60	10.99
	8H	19.93	20.95	20.36	21.34	21.75	9.18	10.20	9.61	10.59	10.99
	12H	19.98	20.95	20.41	21.33	21.76	9.18	10.16	9.62	10.54	10.97
4H	2H	17.06	18.23	17.46	18.58	18.96	8.88	10.05	9.29	10.40	10.78
	3H	18.71	19.67	19.12	20.07	20.47	9.60	10.56	10.01	10.96	11.36
	4H	19.32	20.17	19.75	20.59	21.03	9.80	10.66	10.23	11.08	11.52
	6H	19.81	20.55	20.27	20.99	21.46	9.97	10.71	10.43	11.15	11.62
	8H	19.95	20.64	20.42	21.09	21.56	10.00	10.69	10.47	11.14	11.61
	12H	20.02	20.64	20.51	21.12	21.59	10.02	10.64	10.51	11.12	11.59
8H	4H	19.21	19.90	19.68	20.35	20.82	10.07	10.76	10.54	11.21	11.68
	6H	19.69	20.26	20.19	20.75	21.23	10.27	10.84	10.77	11.33	11.81
	8H	19.83	20.34	20.35	20.85	21.35	10.33	10.84	10.85	11.35	11.84
	12H	19.92	20.37	20.44	20.87	21.44	10.39	10.84	10.90	11.33	11.90
12H	4H	19.17	19.78	19.65	20.26	20.74	10.10	10.71	10.58	11.19	11.67
	6H	19.63	20.14	20.15	20.66	21.15	10.30	10.81	10.82	11.32	11.81
	8H	19.80	20.25	20.31	20.74	21.31	10.40	10.84	10.91	11.34	11.91