

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: P1056036

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056036
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
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-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

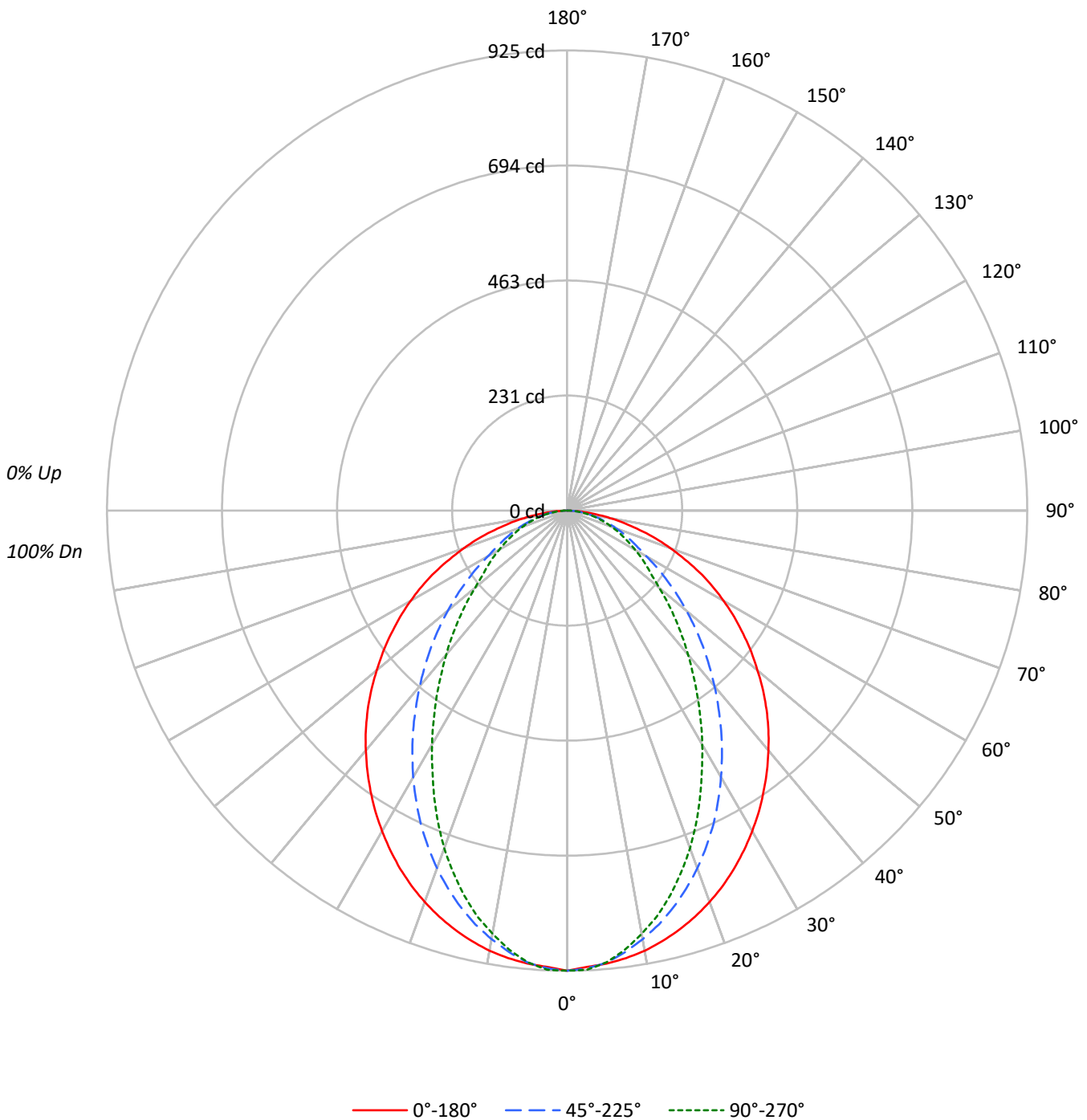
Lumens per Lamp: N/A
Luminaire Lumens: 1842.4 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8178	8178	8178
5°	8113	8095	8089
10°	8067	7852	7754
15°	7981	7557	7326
20°	7877	7199	6795
25°	7749	6786	6175
30°	7596	6316	5546
35°	7434	5826	4937
40°	7267	5318	4367
45°	7090	4825	3839
50°	6872	4307	3315
55°	6662	3787	3010
60°	6428	3250	2792
65°	6138	2948	2607
70°	5700	2727	2464
75°	5162	2511	2326
80°	4506	2322	2184
85°	3449	2140	1998

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7090 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	4.7
10°-20°	233.6	12.7
20°-30°	323.5	17.6
30°-40°	347.2	18.8
40°-50°	315.7	17.1
50°-60°	248.6	13.5
60°-70°	170.2	9.2
70°-80°	91.6	5.0
80°-90°	25.9	1.4
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°	643.2	34.9
0°-40°	990.3	53.8
0°-60°	1554.7	84.4
0°-90°	1842.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1842.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	914	924	912	907	911	87
15°	872	862	826	803	800	246
25°	794	762	696	645	633	366
35°	689	635	540	474	457	431
45°	567	495	386	319	307	437
55°	432	350	246	198	195	386
65°	293	210	141	125	125	289
75°	151	92	74	67	68	161
85°	34	23	21	20	20	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	925.0	925.0	925.0	925.0	925.0
2.5°	918.2	929.1	920.9	922.3	923.6
5°	914.1	924.3	912.1	907.3	911.4
7.5°	907.3	914.1	895.1	886.2	890.3
10°	898.5	899.8	874.6	861.7	863.7
12.5°	886.2	882.8	852.2	833.8	835.2
15°	871.9	862.4	825.6	803.2	800.4
17.5°	855.6	839.9	796.4	767.8	762.3
20°	837.2	816.1	765.1	728.3	722.2
22.5°	816.8	789.6	731.0	687.5	678.6
25°	794.3	761.6	695.6	645.3	633.0
27.5°	769.8	731.7	657.5	602.4	586.7
30°	744.0	700.4	618.7	559.5	543.2
32.5°	717.4	668.4	579.2	516.6	499.6
35°	688.8	635.0	539.8	474.4	457.4
37.5°	659.6	600.3	499.6	433.6	415.9
40°	629.6	565.6	460.8	392.7	378.4
42.5°	599.0	530.2	422.7	354.6	341.7
45°	567.0	494.8	385.9	319.2	307.0
47.5°	534.3	458.8	348.5	285.9	274.3
50°	499.6	422.7	313.1	253.2	241.0
52.5°	466.2	385.9	279.1	221.2	215.1
55°	432.2	349.9	245.7	198.1	195.3
57.5°	398.2	313.8	215.1	179.7	177.0
60°	363.5	278.4	183.8	160.6	157.9
62.5°	328.8	243.7	160.6	142.3	140.9
65°	293.4	209.6	140.9	125.2	124.6
67.5°	255.9	177.0	123.2	110.3	109.6
70°	220.5	144.3	105.5	95.3	95.3
72.5°	187.2	114.3	89.2	81.0	81.0
75°	151.1	91.9	73.5	67.4	68.1
77.5°	119.1	72.1	59.2	55.1	55.1
80°	88.5	53.8	45.6	42.2	42.9
82.5°	59.9	37.4	32.7	30.6	30.6
85°	34.0	23.1	21.1	19.7	19.7
87.5°	12.3	10.9	10.2	8.8	9.5
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	18.44	19.97	18.81	20.28	20.60	14.22	15.75	14.59	16.06	16.37
	3H	20.22	21.59	20.60	21.92	22.28	15.83	17.20	16.21	17.53	17.89
	4H	20.89	22.18	21.29	22.52	22.90	16.46	17.75	16.86	18.10	18.48
	6H	21.40	22.59	21.81	22.95	23.35	16.96	18.15	17.37	18.52	18.91
	8H	21.56	22.69	21.99	23.08	23.48	17.13	18.27	17.56	18.66	19.06
	12H	21.66	22.75	22.09	23.13	23.56	17.25	18.34	17.69	18.72	19.15
4H	2H	18.54	19.82	18.94	20.17	20.55	14.94	16.22	15.34	16.57	16.95
	3H	20.48	21.55	20.89	21.95	22.35	16.75	17.82	17.16	18.22	18.62
	4H	21.24	22.20	21.67	22.62	23.06	17.48	18.45	17.92	18.86	19.30
	6H	21.87	22.71	22.33	23.16	23.61	18.10	18.94	18.56	19.38	19.84
	8H	22.09	22.88	22.56	23.32	23.79	18.32	19.10	18.78	19.54	20.01
	12H	22.25	22.95	22.73	23.43	23.90	18.48	19.18	18.96	19.66	20.13
8H	4H	21.30	22.08	21.76	22.52	22.99	17.87	18.66	18.34	19.10	19.57
	6H	21.99	22.64	22.49	23.13	23.61	18.60	19.25	19.10	19.74	20.22
	8H	22.26	22.85	22.78	23.35	23.84	18.89	19.47	19.41	19.98	20.47
	12H	22.48	23.00	22.99	23.49	24.05	19.14	19.65	19.65	20.14	20.71
12H	4H	21.29	21.99	21.77	22.47	22.94	17.93	18.63	18.41	19.11	19.58
	6H	21.99	22.57	22.50	23.08	23.57	18.69	19.27	19.20	19.78	20.27
	8H	22.30	22.81	22.81	23.30	23.87	19.04	19.55	19.54	20.04	20.61