

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055402

Luminaire Tested: S122R3DR-H865D930-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055402
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H865D930-X4F0-XX-UDD-FLL-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

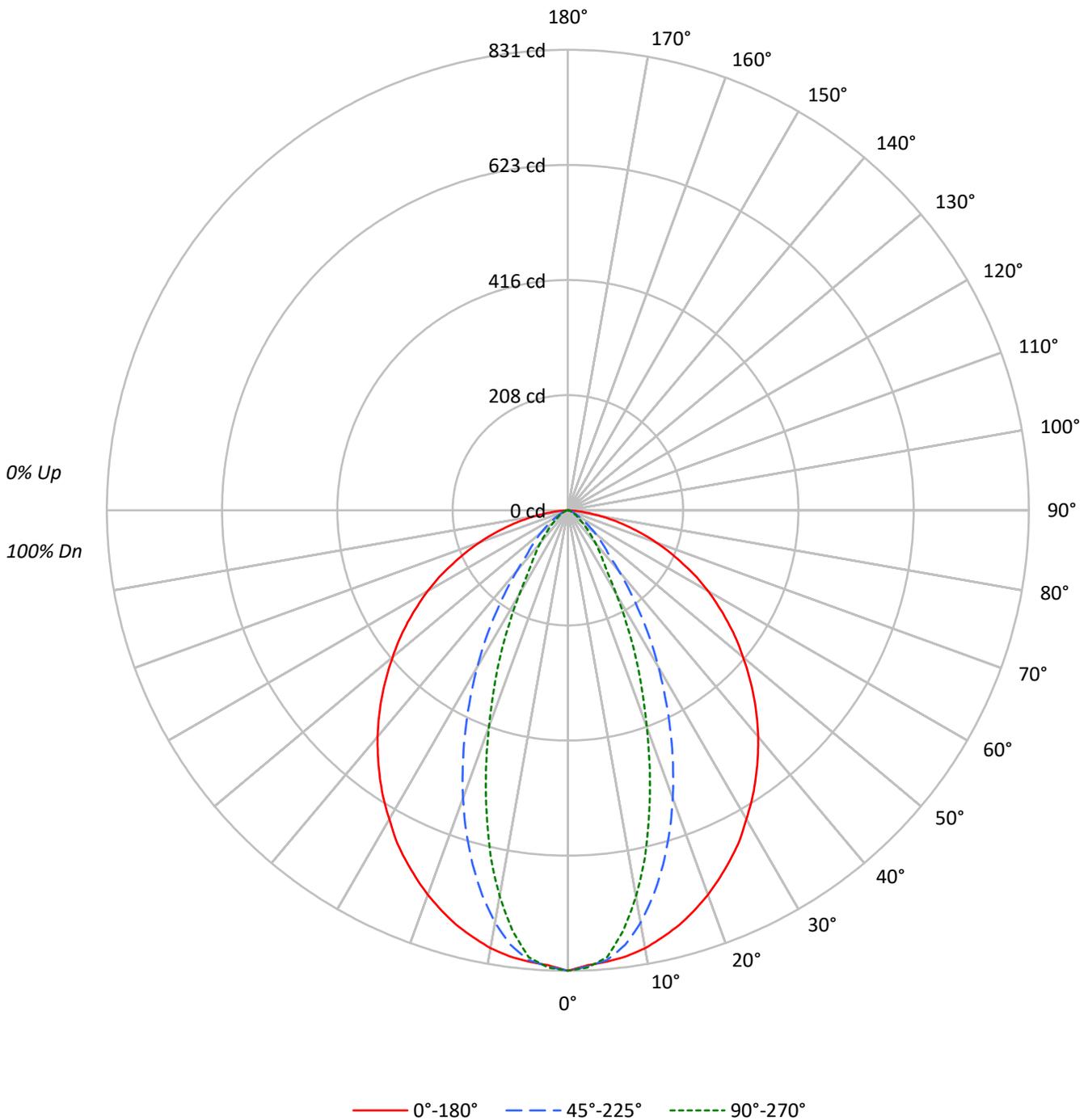
Lumens per Lamp: N/A
Luminaire Lumens: 952.2 lumens
Efficiency: N/A
Efficacy: 30.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15740	15740	15740
5°	15549	15490	15395
10°	15435	14534	13613
15°	15197	13000	11104
20°	14883	11147	8375
25°	14516	9131	5981
30°	14078	7127	3809
35°	13657	5227	2544
40°	13195	3524	1914
45°	12687	2484	1364
50°	12155	1889	961
55°	11637	1311	707
60°	11072	887	580
65°	10270	641	457
70°	9362	510	393
75°	8125	447	300
80°	6448	338	338
85°	3543	435	217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12687 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.0	8.0
10°-20°	186.4	19.6
20°-30°	213.0	22.4
30°-40°	180.6	19.0
40°-50°	134.8	14.2
50°-60°	87.1	9.1
60°-70°	48.6	5.1
70°-80°	21.3	2.2
80°-90°	4.4	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°	475.4	49.9
0°-40°	656.0	68.9
0°-60°	877.9	92.2
0°-90°	952.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	952.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	818	828	814	806	810	78
15°	775	756	663	593	566	218
25°	694	613	437	320	286	320
35°	590	445	226	123	110	369
45°	474	281	93	60	51	365
55°	352	133	40	24	21	315
65°	229	49	14	11	10	228
75°	111	10	6	5	4	118
85°	16	1	2	1	1	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	830.8	830.8	830.8	830.8	830.8
2.5°	821.7	833.9	823.7	823.7	825.7
5°	817.6	827.8	814.5	806.4	809.5
7.5°	811.5	818.6	791.1	766.7	764.7
10°	802.3	805.4	755.5	717.8	707.6
12.5°	789.1	782.0	711.7	658.8	641.5
15°	774.8	755.5	662.8	592.6	566.1
17.5°	757.5	722.9	608.9	523.3	490.8
20°	738.2	689.3	552.9	451.1	415.4
22.5°	716.8	651.6	494.8	382.8	347.2
25°	694.4	612.9	436.8	319.7	286.1
27.5°	671.0	572.2	379.8	262.7	226.0
30°	643.5	530.5	325.8	207.7	174.1
32.5°	618.0	486.7	275.9	160.9	132.4
35°	590.5	444.9	226.0	123.2	110.0
37.5°	562.0	403.2	182.3	103.9	92.7
40°	533.5	361.5	142.5	87.6	77.4
42.5°	504.0	320.7	110.0	73.3	63.1
45°	473.5	281.0	92.7	60.1	50.9
47.5°	442.9	241.3	77.4	47.9	40.7
50°	412.4	203.6	64.1	37.7	32.6
52.5°	382.8	168.0	50.9	30.5	26.5
55°	352.3	133.4	39.7	24.4	21.4
57.5°	321.7	103.9	30.5	20.4	18.3
60°	292.2	78.4	23.4	16.3	15.3
62.5°	261.7	63.1	18.3	13.2	12.2
65°	229.1	48.9	14.3	11.2	10.2
67.5°	199.6	35.6	11.2	9.2	8.1
70°	169.0	24.4	9.2	8.1	7.1
72.5°	139.5	15.3	7.1	6.1	6.1
75°	111.0	10.2	6.1	5.1	4.1
77.5°	84.5	6.1	4.1	4.1	3.1
80°	59.1	4.1	3.1	3.1	3.1
82.5°	36.7	3.1	2.0	2.0	2.0
85°	16.3	1.0	2.0	1.0	1.0
87.5°	3.1	1.0	1.0	1.0	1.0
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	17.83	19.15	18.19	19.46	19.78	4.15	5.47	4.51	5.78	6.09
	3H	20.30	21.47	20.68	21.80	22.16	4.99	6.16	5.37	6.49	6.86
	4H	21.25	22.35	21.66	22.70	23.08	5.27	6.36	5.67	6.71	7.09
	6H	21.94	22.95	22.36	23.32	23.71	5.46	6.47	5.88	6.84	7.23
	8H	22.14	23.09	22.57	23.48	23.88	5.54	6.49	5.97	6.88	7.28
	12H	22.22	23.13	22.65	23.51	23.94	5.56	6.47	5.99	6.85	7.28
4H	2H	17.61	18.71	18.02	19.06	19.44	4.72	5.81	5.12	6.16	6.55
	3H	20.10	20.99	20.51	21.40	21.80	5.74	6.64	6.16	7.04	7.45
	4H	21.04	21.84	21.48	22.26	22.70	6.11	6.91	6.55	7.33	7.78
	6H	21.80	22.49	22.26	22.93	23.40	6.41	7.11	6.88	7.55	8.02
	8H	22.04	22.68	22.51	23.13	23.60	6.51	7.16	6.98	7.60	8.07
	12H	22.17	22.74	22.66	23.22	23.69	6.55	7.12	7.04	7.60	8.08
8H	4H	20.91	21.55	21.38	22.00	22.47	6.49	7.13	6.96	7.58	8.05
	6H	21.65	22.17	22.15	22.67	23.15	6.86	7.38	7.36	7.88	8.36
	8H	21.89	22.36	22.41	22.88	23.37	6.99	7.46	7.51	7.98	8.47
	12H	22.04	22.46	22.56	22.95	23.52	7.07	7.48	7.58	7.98	8.55
12H	4H	20.86	21.43	21.35	21.92	22.39	6.61	7.18	7.09	7.66	8.13
	6H	21.59	22.06	22.11	22.57	23.06	6.97	7.45	7.50	7.96	8.45
	8H	21.85	22.27	22.37	22.76	23.33	7.15	7.56	7.66	8.06	8.63