

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: P1055387

Luminaire Tested: S122R3DR-H865D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055387
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-H865D830-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

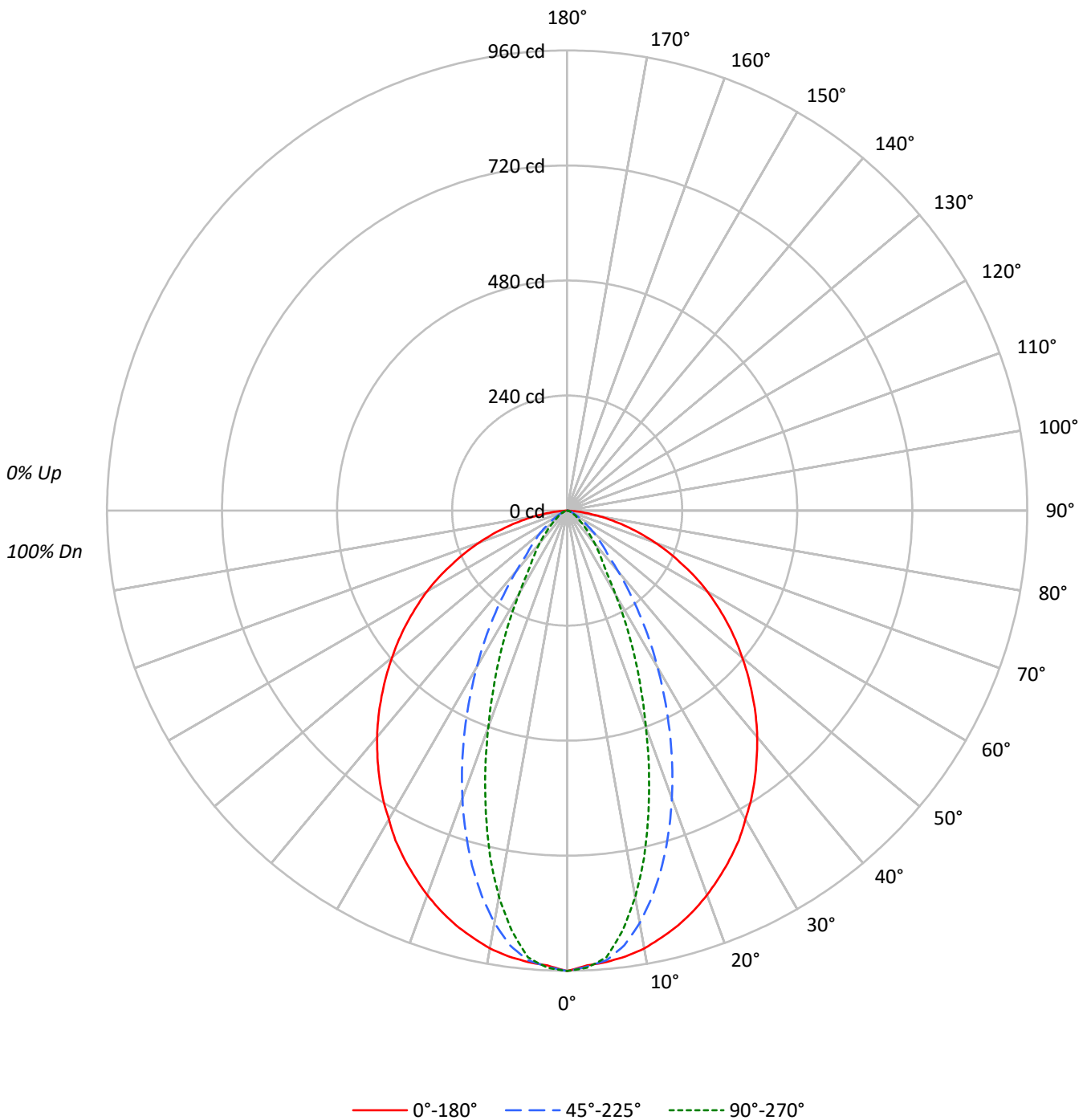
Lumens per Lamp: N/A
Luminaire Lumens: 1100.8 lumens
Efficiency: N/A
Efficacy: 35.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (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	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°	18197	18197	18197
5°	17976	17909	17797
10°	17843	16803	15739
15°	17570	15030	12837
20°	17206	12887	9684
25°	16782	10557	6915
30°	16274	8241	4404
35°	15790	6044	2940
40°	15255	4076	2214
45°	14664	2870	1578
50°	14050	2187	1111
55°	13454	1516	816
60°	12800	1027	671
65°	11871	740	529
70°	10824	587	454
75°	9392	520	344
80°	7452	382	382
85°	4087	522	261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14664 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.8	8.0
10°-20°	215.5	19.6
20°-30°	246.2	22.4
30°-40°	208.8	19.0
40°-50°	155.8	14.2
50°-60°	100.7	9.1
60°-70°	56.1	5.1
70°-80°	24.7	2.2
80°-90°	5.1	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°	549.6	49.9
0°-40°	758.4	68.9
0°-60°	1014.9	92.2
0°-90°	1100.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1100.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	960	960	960	960	960	
5°	945	957	942	932	936	90
15°	896	873	766	685	654	252
25°	803	709	505	370	331	370
35°	683	514	261	142	127	427
45°	547	325	107	69	59	422
55°	407	154	46	28	25	364
65°	265	56	16	13	12	263
75°	128	12	7	6	5	137
85°	19	1	2	1	1	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	960.5	960.5	960.5	960.5	960.5
2.5°	949.9	964.0	952.3	952.3	954.6
5°	945.2	957.0	941.7	932.3	935.8
7.5°	938.1	946.4	914.6	886.3	884.0
10°	927.5	931.1	873.4	829.8	818.1
12.5°	912.2	904.0	822.8	761.6	741.6
15°	895.8	873.4	766.3	685.1	654.5
17.5°	875.8	835.7	703.9	605.0	567.4
20°	853.4	796.9	639.2	521.5	480.3
22.5°	828.7	753.3	572.1	442.6	401.4
25°	802.8	708.6	505.0	369.6	330.8
27.5°	775.7	661.5	439.1	303.7	261.3
30°	743.9	613.3	376.7	240.1	201.3
32.5°	714.5	562.6	319.0	186.0	153.0
35°	682.7	514.4	261.3	142.4	127.1
37.5°	649.8	466.1	210.7	120.1	107.1
40°	616.8	417.9	164.8	101.2	89.5
42.5°	582.7	370.8	127.1	84.8	73.0
45°	547.3	324.9	107.1	69.4	58.9
47.5°	512.0	279.0	89.5	55.3	47.1
50°	476.7	235.4	74.2	43.6	37.7
52.5°	442.6	194.2	58.9	35.3	30.6
55°	407.3	154.2	45.9	28.3	24.7
57.5°	372.0	120.1	35.3	23.5	21.2
60°	337.8	90.6	27.1	18.8	17.7
62.5°	302.5	73.0	21.2	15.3	14.1
65°	264.8	56.5	16.5	12.9	11.8
67.5°	230.7	41.2	12.9	10.6	9.4
70°	195.4	28.3	10.6	9.4	8.2
72.5°	161.3	17.7	8.2	7.1	7.1
75°	128.3	11.8	7.1	5.9	4.7
77.5°	97.7	7.1	4.7	4.7	3.5
80°	68.3	4.7	3.5	3.5	3.5
82.5°	42.4	3.5	2.4	2.4	2.4
85°	18.8	1.2	2.4	1.2	1.2
87.5°	3.5	1.2	1.2	1.2	1.2
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	18.33	19.65	18.70	19.97	20.28	4.63	5.95	5.00	6.26	6.58
	3H	20.80	21.97	21.18	22.30	22.67	5.48	6.65	5.86	6.98	7.35
	4H	21.76	22.85	22.16	23.20	23.58	5.76	6.85	6.16	7.20	7.58
	6H	22.45	23.45	22.86	23.82	24.21	5.95	6.95	6.36	7.32	7.71
	8H	22.64	23.59	23.07	23.98	24.39	6.02	6.97	6.45	7.37	7.77
	12H	22.72	23.63	23.16	24.01	24.44	6.05	6.96	6.48	7.34	7.77
4H	2H	18.12	19.21	18.52	19.56	19.94	5.21	6.30	5.61	6.65	7.03
	3H	20.60	21.50	21.01	21.90	22.30	6.24	7.13	6.65	7.54	7.94
	4H	21.54	22.35	21.98	22.76	23.21	6.61	7.41	7.04	7.83	8.27
	6H	22.30	22.99	22.76	23.44	23.90	6.90	7.59	7.36	8.03	8.50
	8H	22.54	23.19	23.01	23.63	24.11	7.00	7.64	7.47	8.09	8.56
	12H	22.67	23.24	23.16	23.72	24.20	7.05	7.62	7.53	8.10	8.57
8H	4H	21.41	22.06	21.88	22.50	22.97	6.98	7.63	7.45	8.07	8.54
	6H	22.15	22.68	22.65	23.17	23.65	7.34	7.86	7.84	8.36	8.84
	8H	22.40	22.87	22.92	23.38	23.87	7.48	7.95	8.00	8.47	8.96
	12H	22.55	22.96	23.06	23.45	24.03	7.57	7.98	8.09	8.48	9.05
12H	4H	21.37	21.94	21.85	22.42	22.89	7.10	7.67	7.59	8.16	8.63
	6H	22.09	22.56	22.61	23.08	23.57	7.46	7.93	7.98	8.44	8.94
	8H	22.36	22.77	22.87	23.26	23.84	7.64	8.06	8.16	8.55	9.12