

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: P1055408

Luminaire Tested: S122R3DR-H865D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055408
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-H865D940-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

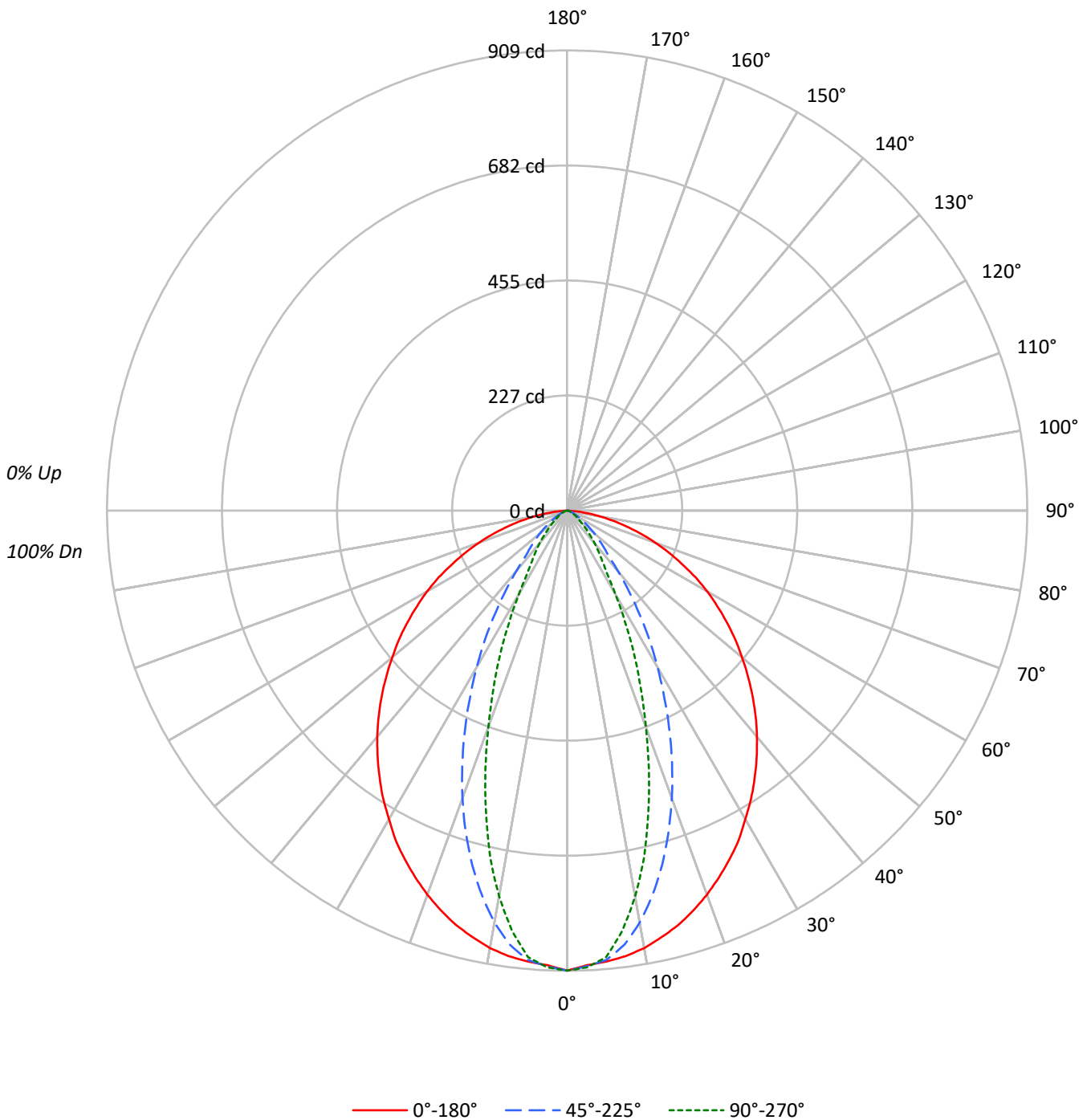
Lumens per Lamp: N/A
Luminaire Lumens: 1041.4 lumens
Efficiency: N/A
Efficacy: 33.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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					100			
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17216	17216	17216
5°	17006	16943	16837
10°	16881	15896	14890
15°	16623	14220	12145
20°	16279	12192	9162
25°	15877	9986	6541
30°	15397	7797	4165
35°	14939	5717	2782
40°	14431	3856	2092
45°	13874	2714	1492
50°	13293	2069	1049
55°	12727	1434	773
60°	12110	970	633
65°	11234	699	498
70°	10242	554	432
75°	8887	490	329
80°	7048	360	360
85°	3869	478	239

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13874 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.1	8.0
10°-20°	203.9	19.6
20°-30°	232.9	22.4
30°-40°	197.5	19.0
40°-50°	147.4	14.2
50°-60°	95.3	9.1
60°-70°	53.1	5.1
70°-80°	23.3	2.2
80°-90°	4.8	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°	519.9	49.9
0°-40°	717.5	68.9
0°-60°	960.1	92.2
0°-90°	1041.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1041.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	909	909	909	909	909	
5°	894	905	891	882	885	85
15°	848	826	725	648	619	239
25°	760	670	478	350	313	350
35°	646	487	247	135	120	404
45°	518	307	101	66	56	399
55°	385	146	43	27	23	345
65°	251	54	16	12	11	249
75°	121	11	7	6	4	129
85°	18	1	2	1	1	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	908.7	908.7	908.7	908.7	908.7
2.5°	898.7	912.0	900.9	900.9	903.1
5°	894.2	905.4	890.9	882.0	885.3
7.5°	887.5	895.3	865.3	838.5	836.3
10°	877.5	880.9	826.3	785.1	774.0
12.5°	863.0	855.3	778.4	720.5	701.6
15°	847.5	826.3	725.0	648.1	619.2
17.5°	828.5	790.7	665.9	572.4	536.8
20°	807.4	753.9	604.7	493.3	454.4
22.5°	784.0	712.7	541.2	418.7	379.7
25°	759.5	670.4	477.7	349.7	312.9
27.5°	733.9	625.8	415.4	287.3	247.2
30°	703.8	580.2	356.4	227.2	190.4
32.5°	676.0	532.3	301.8	176.0	144.8
35°	645.9	486.6	247.2	134.7	120.3
37.5°	614.7	441.0	199.3	113.6	101.3
40°	583.5	395.3	155.9	95.8	84.6
42.5°	551.2	350.8	120.3	80.2	69.0
45°	517.8	307.4	101.3	65.7	55.7
47.5°	484.4	263.9	84.6	52.3	44.5
50°	451.0	222.7	70.2	41.2	35.6
52.5°	418.7	183.7	55.7	33.4	29.0
55°	385.3	145.9	43.4	26.7	23.4
57.5°	351.9	113.6	33.4	22.3	20.0
60°	319.6	85.7	25.6	17.8	16.7
62.5°	286.2	69.0	20.0	14.5	13.4
65°	250.6	53.5	15.6	12.2	11.1
67.5°	218.3	39.0	12.2	10.0	8.9
70°	184.9	26.7	10.0	8.9	7.8
72.5°	152.6	16.7	7.8	6.7	6.7
75°	121.4	11.1	6.7	5.6	4.5
77.5°	92.4	6.7	4.5	4.5	3.3
80°	64.6	4.5	3.3	3.3	3.3
82.5°	40.1	3.3	2.2	2.2	2.2
85°	17.8	1.1	2.2	1.1	1.1
87.5°	3.3	1.1	1.1	1.1	1.1
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	18.14	19.46	18.50	19.77	20.09	4.45	5.77	4.82	6.09	6.40
	3H	20.61	21.78	20.99	22.11	22.48	5.30	6.47	5.68	6.80	7.17
	4H	21.57	22.66	21.97	23.01	23.39	5.58	6.67	5.98	7.02	7.40
	6H	22.25	23.26	22.67	23.63	24.02	5.77	6.77	6.18	7.14	7.53
	8H	22.45	23.40	22.88	23.79	24.19	5.84	6.79	6.27	7.18	7.58
	12H	22.53	23.44	22.96	23.82	24.25	5.86	6.77	6.29	7.15	7.58
4H	2H	17.92	19.02	18.33	19.37	19.75	5.02	6.12	5.43	6.47	6.85
	3H	20.41	21.30	20.82	21.71	22.11	6.05	6.95	6.47	7.35	7.76
	4H	21.35	22.15	21.79	22.57	23.01	6.43	7.23	6.86	7.65	8.09
	6H	22.11	22.80	22.57	23.24	23.71	6.71	7.41	7.18	7.85	8.32
	8H	22.35	22.99	22.82	23.44	23.91	6.81	7.45	7.28	7.90	8.37
	12H	22.48	23.05	22.96	23.53	24.00	6.85	7.42	7.34	7.90	8.38
8H	4H	21.22	21.86	21.69	22.31	22.78	6.80	7.44	7.27	7.89	8.36
	6H	21.96	22.48	22.46	22.98	23.46	7.15	7.68	7.66	8.17	8.66
	8H	22.20	22.67	22.73	23.19	23.68	7.29	7.76	7.81	8.27	8.77
	12H	22.35	22.77	22.87	23.26	23.83	7.37	7.78	7.88	8.28	8.85
12H	4H	21.17	21.74	21.66	22.23	22.70	6.92	7.49	7.41	7.97	8.45
	6H	21.90	22.37	22.42	22.88	23.38	7.27	7.74	7.79	8.26	8.75
	8H	22.16	22.58	22.68	23.07	23.64	7.45	7.86	7.96	8.35	8.93