

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: P1055404

Luminaire Tested: S122R3DR-H865D935-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055404
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H865D935-X4F0-XX-UDD-FLL-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

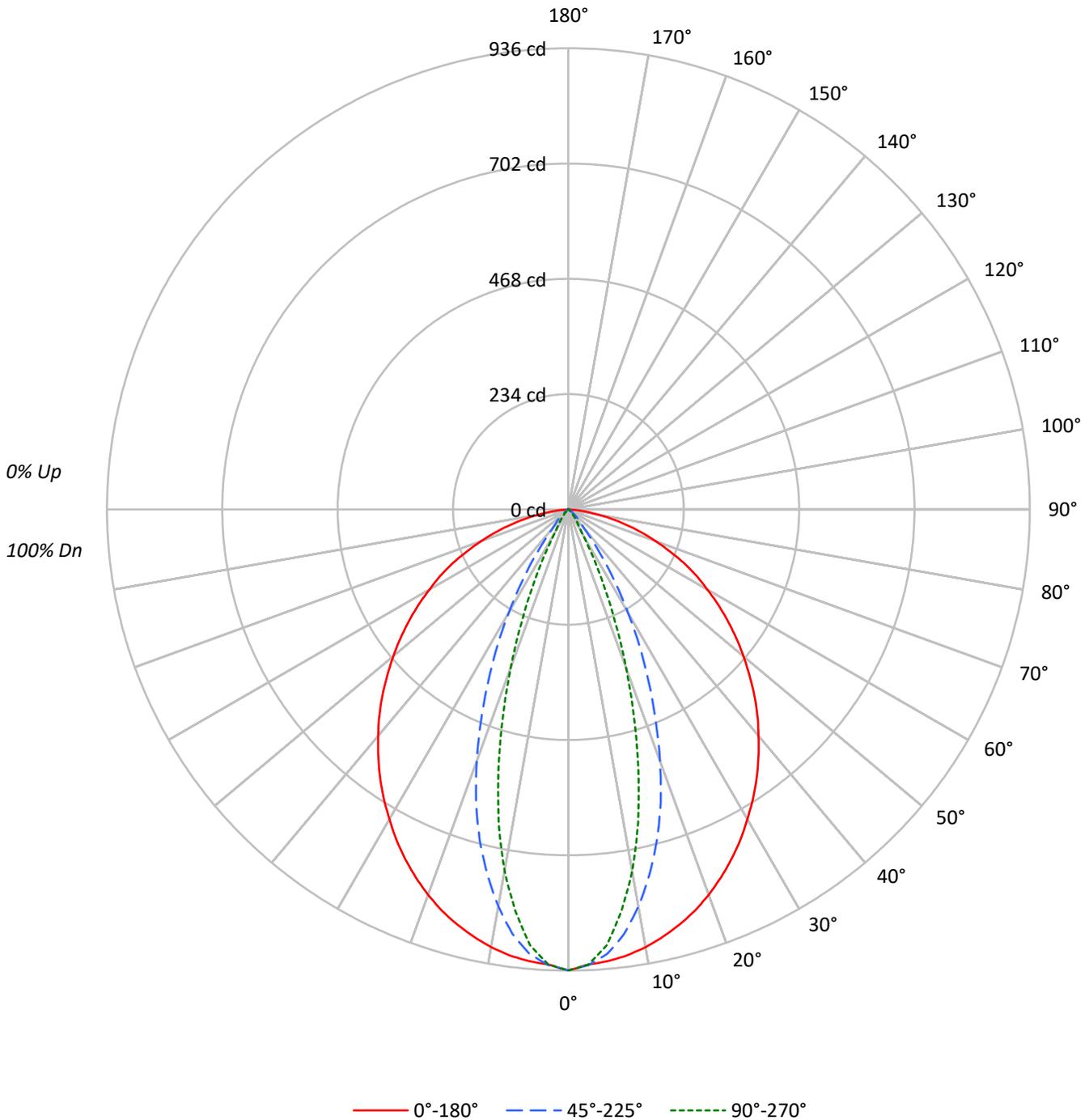
Lumens per Lamp: N/A
Luminaire Lumens: 851.1 lumens
Efficiency: N/A
Efficacy: 27.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17724	17724	17724
5°	17504	17219	16892
10°	17355	15743	14336
15°	17104	13624	10735
20°	16781	10948	6873
25°	16364	8025	3529
30°	15878	5246	1153
35°	15394	2910	671
40°	14839	1170	373
45°	14289	777	145
50°	13658	445	65
55°	13034	215	36
60°	12345	83	0
65°	11615	49	0
70°	10425	61	0
75°	8974	81	0
80°	6808	0	0
85°	2804	239	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14289 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	9.9
10°-20°	194.9	22.9
20°-30°	197.8	23.2
30°-40°	148.4	17.4
40°-50°	103.9	12.2
50°-60°	63.6	7.5
60°-70°	37.9	4.5
70°-80°	17.5	2.1
80°-90°	3.2	0.4
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°	476.6	56.0
0°-40°	625.0	73.4
0°-60°	792.6	93.1
0°-90°	851.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	851.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	920	929	905	888	888	87
15°	872	825	695	588	547	246
25°	783	645	384	219	169	360
35°	666	433	126	38	29	416
45°	533	229	29	9	5	411
55°	395	70	6	2	1	353
65°	259	20	1	1	0	255
75°	123	2	1	1	0	130
85°	13	0	1	1	0	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	935.5	935.5	935.5	935.5	935.5
2.5°	924.7	938.7	925.8	923.6	924.7
5°	920.4	929.0	905.4	888.2	888.2
7.5°	912.9	912.9	868.8	833.3	822.6
10°	902.1	890.3	818.3	761.3	745.2
12.5°	888.2	860.2	759.1	678.5	652.7
15°	872.0	824.7	694.6	588.2	547.3
17.5°	853.8	784.9	622.6	490.3	443.0
20°	832.3	741.9	543.0	390.3	340.9
22.5°	808.6	694.6	462.4	301.1	248.4
25°	782.8	645.2	383.9	219.4	168.8
27.5°	755.9	593.5	311.8	150.5	103.2
30°	725.8	539.8	239.8	89.2	52.7
32.5°	696.8	488.2	179.6	48.4	38.7
35°	665.6	433.3	125.8	37.6	29.0
37.5°	633.3	381.7	77.4	28.0	21.5
40°	600.0	329.0	47.3	20.4	15.1
42.5°	567.7	279.6	37.6	14.0	9.7
45°	533.3	229.0	29.0	8.6	5.4
47.5°	497.8	182.8	21.5	5.4	3.2
50°	463.4	141.9	15.1	3.2	2.2
52.5°	429.0	104.3	9.7	2.2	1.1
55°	394.6	69.9	6.5	2.2	1.1
57.5°	360.2	49.5	4.3	1.1	1.1
60°	325.8	38.7	2.2	1.1	0.0
62.5°	293.5	30.1	2.2	1.1	1.1
65°	259.1	20.4	1.1	1.1	0.0
67.5°	222.6	12.9	1.1	1.1	0.0
70°	188.2	7.5	1.1	1.1	0.0
72.5°	154.8	4.3	1.1	1.1	0.0
75°	122.6	2.2	1.1	1.1	0.0
77.5°	91.4	1.1	0.0	1.1	0.0
80°	62.4	0.0	0.0	1.1	0.0
82.5°	36.6	0.0	0.0	1.1	0.0
85°	12.9	0.0	1.1	1.1	0.0
87.5°	0.0	0.0	1.1	1.1	0.0
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	16.20	17.46	16.57	17.77	18.09	0.00	0.00	0.00	0.00	0.00
	3H	19.94	21.06	20.32	21.39	21.76	0.00	0.00	0.00	0.00	0.00
	4H	21.25	22.29	21.66	22.64	23.03	0.00	0.00	0.00	0.00	0.00
	6H	22.11	23.06	22.52	23.43	23.83	0.00	0.00	0.00	0.00	0.00
	8H	22.32	23.23	22.75	23.62	24.02	0.00	0.00	0.00	0.00	0.00
	12H	22.39	23.25	22.82	23.63	24.06	0.00	0.00	0.00	0.00	0.00
4H	2H	15.96	17.00	16.36	17.35	17.73	0.00	0.00	0.00	0.00	0.00
	3H	19.70	20.55	20.11	20.95	21.36	0.00	0.00	0.00	0.00	0.00
	4H	20.99	21.75	21.43	22.17	22.62	0.00	0.00	0.00	0.00	0.00
	6H	21.91	22.57	22.37	23.01	23.48	0.00	0.00	0.00	0.00	0.00
	8H	22.17	22.78	22.64	23.23	23.70	0.00	0.00	0.00	0.00	0.00
	12H	22.27	22.81	22.76	23.29	23.77	0.00	0.00	0.00	0.00	0.00
8H	4H	20.85	21.46	21.32	21.91	22.38	0.00	0.00	0.00	0.00	0.00
	6H	21.75	22.24	22.25	22.74	23.22	0.00	0.00	0.00	0.00	0.00
	8H	22.01	22.45	22.53	22.97	23.46	0.00	0.00	0.00	0.00	0.00
	12H	22.12	22.51	22.64	23.01	23.58	0.00	0.00	0.00	0.00	0.00
12H	4H	20.80	21.34	21.28	21.82	22.30	0.00	0.00	0.00	0.00	0.00
	6H	21.68	22.13	22.21	22.65	23.14	0.00	0.00	0.00	0.00	0.00
	8H	21.96	22.35	22.48	22.85	23.42	0.00	0.00	0.00	0.00	0.00