

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: P1055396

Luminaire Tested: S122R3DR-H865D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055396
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-H865D850-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

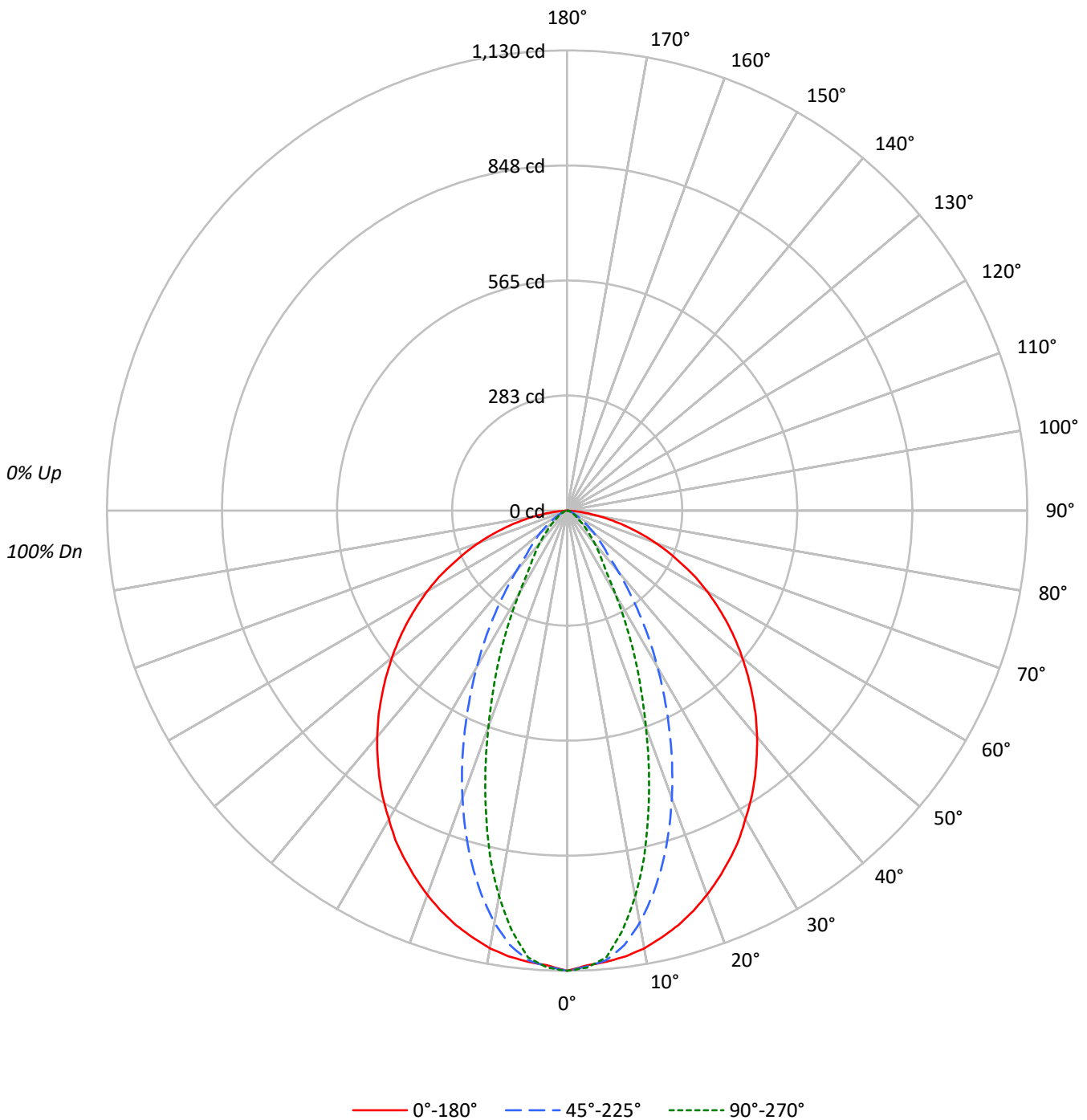
Lumens per Lamp: N/A
Luminaire Lumens: 1295.2 lumens
Efficiency: N/A
Efficacy: 41.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	21411	21411	21411
5°	21150	21072	20941
10°	20996	19769	18519
15°	20673	17684	15103
20°	20244	15162	11393
25°	19744	12421	8136
30°	19149	9696	5180
35°	18579	7112	3460
40°	17948	4796	2604
45°	17255	3376	1854
50°	16532	2573	1306
55°	15828	1784	961
60°	15062	1209	788
65°	13969	870	619
70°	12735	692	537
75°	11053	608	403
80°	8761	458	458
85°	4826	609	304

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17255 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.3	8.0
10°-20°	253.6	19.6
20°-30°	289.7	22.4
30°-40°	245.7	19.0
40°-50°	183.3	14.2
50°-60°	118.5	9.1
60°-70°	66.0	5.1
70°-80°	29.0	2.2
80°-90°	6.0	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°	646.6	49.9
0°-40°	892.3	68.9
0°-60°	1194.1	92.2
0°-90°	1295.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1295.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1112	1126	1108	1097	1101	106
15°	1054	1028	902	806	770	297
25°	944	834	594	435	389	435
35°	803	605	308	168	150	502
45°	644	382	126	82	69	497
55°	479	181	54	33	29	429
65°	312	66	19	15	14	310
75°	151	14	8	7	6	161
85°	22	1	3	1	1	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1130.1	<i>1130.1</i>	1130.1	1130.1	1130.1
2.5°	<i>1117.7</i>	<i>1134.3</i>	<i>1120.4</i>	<i>1120.4</i>	<i>1123.2</i>
5°	1112.1	<i>1126.0</i>	1108.0	1096.9	1101.1
7.5°	1103.8	<i>1113.5</i>	1076.1	1042.9	1040.1
10°	1091.4	<i>1095.5</i>	1027.6	976.4	962.6
12.5°	1073.4	<i>1063.7</i>	968.1	896.1	872.5
15°	1054.0	<i>1027.6</i>	901.6	806.1	770.0
17.5°	1030.4	<i>983.3</i>	828.2	711.9	667.6
20°	1004.1	<i>937.6</i>	752.0	613.5	565.1
22.5°	975.0	<i>886.4</i>	673.1	520.7	472.3
25°	944.5	<i>833.8</i>	594.2	434.9	389.2
27.5°	912.7	<i>778.4</i>	516.6	357.3	307.5
30°	875.3	<i>721.6</i>	443.2	282.5	236.8
32.5°	840.7	<i>662.0</i>	375.3	218.8	180.0
35°	803.3	<i>605.2</i>	307.5	167.6	149.6
37.5°	764.5	<i>548.4</i>	247.9	141.3	126.0
40°	725.7	<i>491.7</i>	193.9	119.1	105.3
42.5°	685.6	<i>436.3</i>	149.6	99.7	85.9
45°	644.0	<i>382.3</i>	126.0	81.7	69.2
47.5°	602.5	<i>328.2</i>	105.3	65.1	55.4
50°	560.9	<i>277.0</i>	87.3	51.2	44.3
52.5°	520.7	<i>228.5</i>	69.2	41.5	36.0
55°	479.2	<i>181.4</i>	54.0	33.2	29.1
57.5°	437.7	<i>141.3</i>	41.5	27.7	24.9
60°	397.5	<i>106.6</i>	31.9	22.2	20.8
62.5°	355.9	<i>85.9</i>	24.9	18.0	16.6
65°	311.6	<i>66.5</i>	19.4	15.2	13.8
67.5°	271.5	<i>48.5</i>	15.2	12.5	11.1
70°	229.9	<i>33.2</i>	12.5	11.1	9.7
72.5°	189.7	<i>20.8</i>	9.7	8.3	8.3
75°	151.0	<i>13.8</i>	8.3	6.9	5.5
77.5°	115.0	<i>8.3</i>	5.5	5.5	4.2
80°	80.3	<i>5.5</i>	4.2	4.2	4.2
82.5°	49.9	<i>4.2</i>	2.8	2.8	2.8
85°	22.2	<i>1.4</i>	2.8	1.4	1.4
87.5°	4.2	<i>1.4</i>	1.4	1.4	1.4
90°	0.0	<i>0.0</i>	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	18.90	20.22	19.26	20.53	20.85	5.21	6.53	5.57	6.84	7.15
	3H	21.37	22.54	21.75	22.87	23.23	6.06	7.23	6.44	7.56	7.93
	4H	22.32	23.41	22.73	23.77	24.15	6.33	7.42	6.73	7.77	8.16
	6H	23.01	24.01	23.43	24.38	24.78	6.53	7.53	6.94	7.90	8.29
	8H	23.21	24.16	23.64	24.55	24.95	6.60	7.55	7.03	7.95	8.35
	12H	23.29	24.20	23.72	24.58	25.01	6.63	7.54	7.06	7.92	8.35
4H	2H	18.68	19.77	19.09	20.13	20.51	5.78	6.87	6.18	7.22	7.61
	3H	21.17	22.06	21.58	22.47	22.87	6.81	7.71	7.23	8.11	8.52
	4H	22.11	22.91	22.54	23.33	23.77	7.18	7.98	7.61	8.40	8.84
	6H	22.86	23.56	23.33	24.00	24.47	7.47	8.16	7.94	8.61	9.08
	8H	23.11	23.75	23.58	24.20	24.67	7.58	8.22	8.05	8.67	9.14
	12H	23.24	23.81	23.72	24.29	24.76	7.62	8.19	8.11	8.67	9.15
8H	4H	21.98	22.62	22.45	23.07	23.54	7.55	8.19	8.02	8.64	9.11
	6H	22.72	23.24	23.22	23.74	24.22	7.91	8.44	8.42	8.94	9.42
	8H	22.96	23.43	23.48	23.95	24.44	8.06	8.53	8.58	9.04	9.54
	12H	23.11	23.53	23.63	24.02	24.59	8.14	8.56	8.66	9.05	9.62
12H	4H	21.93	22.50	22.42	22.98	23.46	7.67	8.24	8.16	8.72	9.20
	6H	22.65	23.13	23.18	23.64	24.13	8.03	8.50	8.56	9.02	9.51
	8H	22.92	23.33	23.43	23.83	24.40	8.22	8.63	8.73	9.13	9.70