

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: P1055260

Luminaire Tested: S122R3DR-S865D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055260
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-S865D850-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

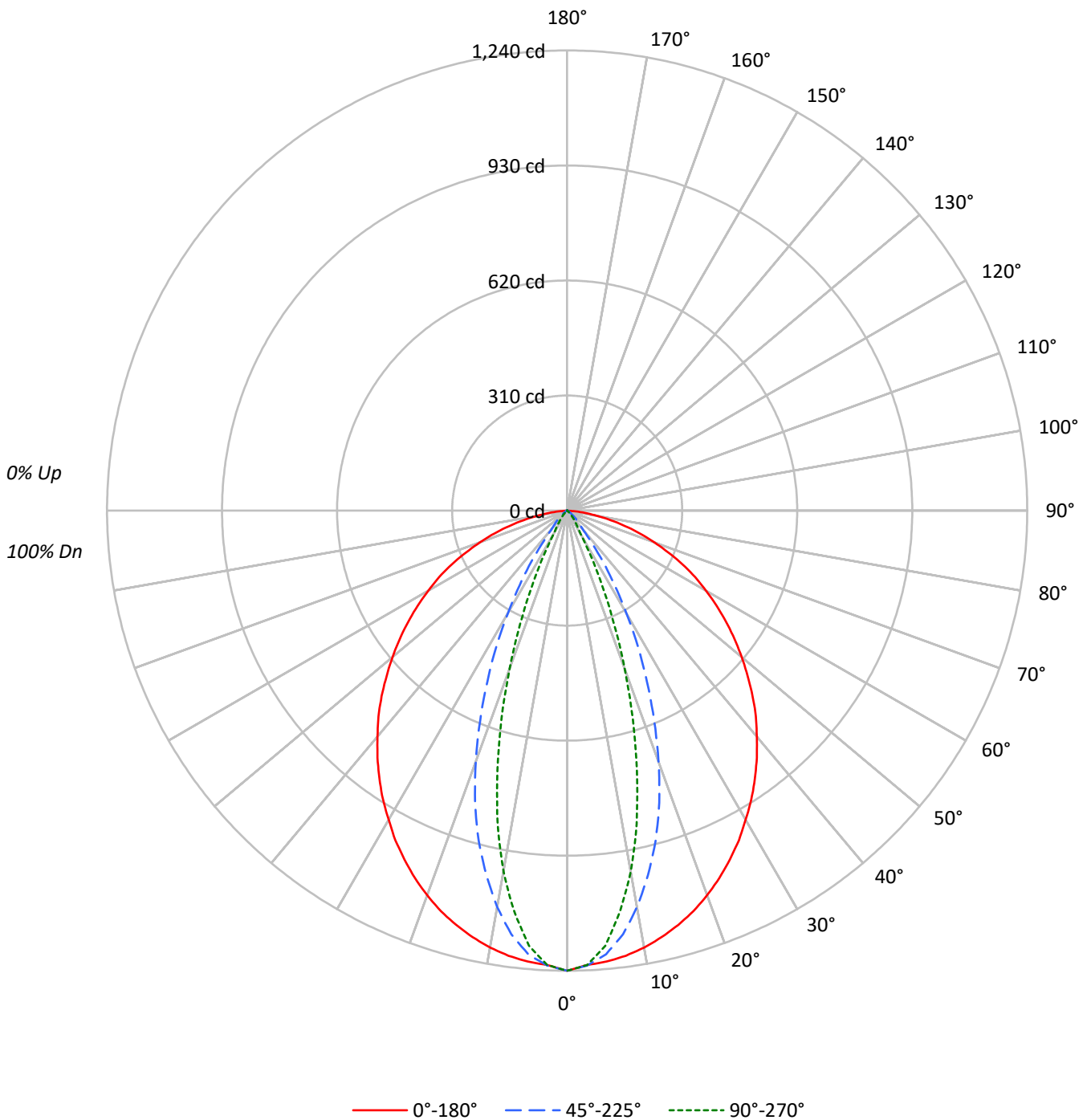
Lumens per Lamp: N/A
Luminaire Lumens: 1128.0 lumens
Efficiency: N/A
Efficacy: 32.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23491	23491	23491
5°	23200	22822	22388
10°	23003	20864	19000
15°	22670	18057	14228
20°	22240	14510	9109
25°	21688	10636	4676
30°	21045	6952	1527
35°	20404	3856	890
40°	19667	1551	495
45°	18940	1032	190
50°	18103	589	85
55°	17275	284	46
60°	16362	110	0
65°	15399	63	0
70°	13815	78	0
75°	11895	102	0
80°	9023	0	0
85°	3717	304	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18940 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.2	9.9
10°-20°	258.3	22.9
20°-30°	262.2	23.2
30°-40°	196.7	17.4
40°-50°	137.8	12.2
50°-60°	84.3	7.5
60°-70°	50.2	4.5
70°-80°	23.2	2.1
80°-90°	4.2	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°	631.6	56.0
0°-40°	828.4	73.4
0°-60°	1050.5	93.1
0°-90°	1128.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1128.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1240	1240	1240	1240	1240	
5°	1220	1231	1200	1177	1177	116
15°	1156	1093	921	780	725	326
25°	1038	855	509	291	224	478
35°	882	574	167	50	38	551
45°	707	304	38	11	7	545
55°	523	93	9	3	1	468
65°	344	27	1	1	0	338
75°	162	3	1	1	0	173
85°	17	0	1	1	0	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.9	1239.9	1239.9	1239.9	1239.9
2.5°	1225.6	1244.2	1227.1	1224.2	1225.6
5°	1219.9	1231.3	1200.0	1177.2	1177.2
7.5°	1209.9	1209.9	1151.5	1104.5	1090.2
10°	1195.7	1180.0	1084.5	1009.0	987.6
12.5°	1177.2	1140.1	1006.2	899.3	865.1
15°	1155.8	1093.1	920.6	779.6	725.4
17.5°	1131.6	1040.4	825.2	649.9	587.2
20°	1103.1	983.4	719.7	517.3	451.8
22.5°	1071.7	920.6	612.8	399.0	329.2
25°	1037.5	855.1	508.8	290.7	223.7
27.5°	1001.9	786.7	413.3	199.5	136.8
30°	962.0	715.4	317.8	118.3	69.8
32.5°	923.5	647.0	238.0	64.1	51.3
35°	882.2	574.3	166.7	49.9	38.5
37.5°	839.4	505.9	102.6	37.1	28.5
40°	795.2	436.1	62.7	27.1	20.0
42.5°	752.5	370.5	49.9	18.5	12.8
45°	706.9	303.6	38.5	11.4	7.1
47.5°	659.8	242.3	28.5	7.1	4.3
50°	614.2	188.1	20.0	4.3	2.9
52.5°	568.6	138.2	12.8	2.9	1.4
55°	523.0	92.6	8.6	2.9	1.4
57.5°	477.4	65.6	5.7	1.4	1.4
60°	431.8	51.3	2.9	1.4	0.0
62.5°	389.1	39.9	2.9	1.4	1.4
65°	343.5	27.1	1.4	1.4	0.0
67.5°	295.0	17.1	1.4	1.4	0.0
70°	249.4	10.0	1.4	1.4	0.0
72.5°	205.2	5.7	1.4	1.4	0.0
75°	162.5	2.9	1.4	1.4	0.0
77.5°	121.1	1.4	0.0	1.4	0.0
80°	82.7	0.0	0.0	1.4	0.0
82.5°	48.5	0.0	0.0	1.4	0.0
85°	17.1	0.0	1.4	1.4	0.0
87.5°	0.0	0.0	1.4	1.4	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	17.18	18.44	17.55	18.75	19.07	0.00	0.00	0.00	0.00	0.00
	3H	20.92	22.04	21.30	22.37	22.73	0.00	0.00	0.00	0.00	0.00
	4H	22.23	23.27	22.64	23.62	24.01	0.00	0.00	0.00	0.00	0.00
	6H	23.09	24.04	23.50	24.41	24.81	0.00	0.00	0.00	0.00	0.00
	8H	23.30	24.20	23.73	24.59	25.00	0.00	0.00	0.00	0.00	0.00
	12H	23.36	24.23	23.80	24.61	25.04	0.00	0.00	0.00	0.00	0.00
4H	2H	16.93	17.97	17.34	18.33	18.71	0.00	0.00	0.00	0.00	0.00
	3H	20.67	21.53	21.09	21.93	22.34	0.00	0.00	0.00	0.00	0.00
	4H	21.97	22.73	22.41	23.15	23.60	0.00	0.00	0.00	0.00	0.00
	6H	22.89	23.55	23.35	23.99	24.46	0.00	0.00	0.00	0.00	0.00
	8H	23.15	23.76	23.62	24.21	24.68	0.00	0.00	0.00	0.00	0.00
	12H	23.25	23.79	23.74	24.27	24.75	0.00	0.00	0.00	0.00	0.00
8H	4H	21.83	22.44	22.30	22.89	23.36	0.00	0.00	0.00	0.00	0.00
	6H	22.73	23.22	23.23	23.72	24.20	0.00	0.00	0.00	0.00	0.00
	8H	22.98	23.43	23.51	23.94	24.44	0.00	0.00	0.00	0.00	0.00
	12H	23.10	23.49	23.62	23.99	24.56	0.00	0.00	0.00	0.00	0.00
12H	4H	21.78	22.32	22.26	22.80	23.27	0.00	0.00	0.00	0.00	0.00
	6H	22.66	23.11	23.19	23.62	24.12	0.00	0.00	0.00	0.00	0.00
	8H	22.94	23.33	23.46	23.82	24.40	0.00	0.00	0.00	0.00	0.00