

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: P1055251

Luminaire Tested: S122R3DR-S865D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055251
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-S865D830-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

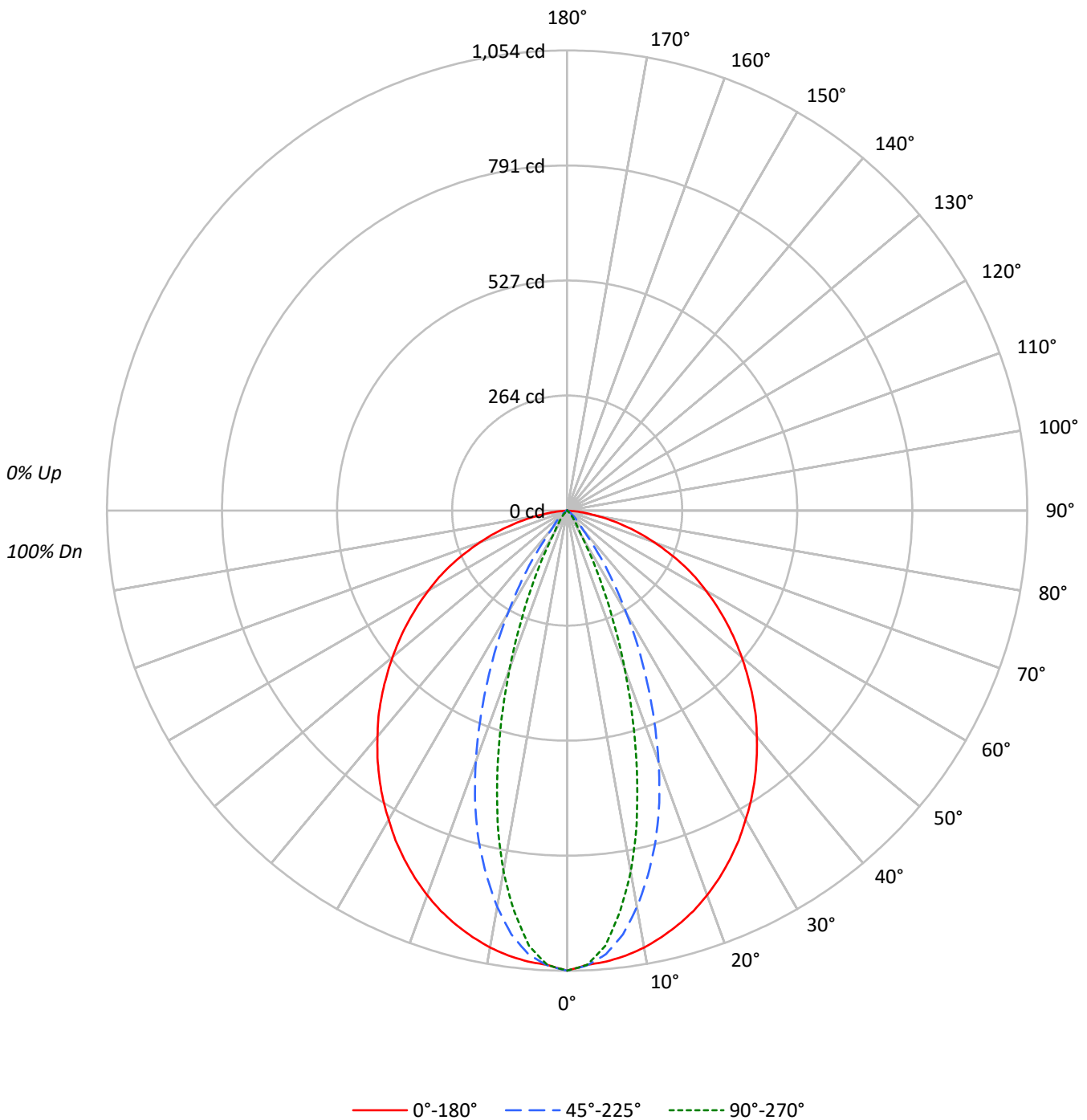
Lumens per Lamp: N/A
Luminaire Lumens: 958.7 lumens
Efficiency: N/A
Efficacy: 27.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19965	19965	19965
5°	19718	19397	19028
10°	19550	17732	16148
15°	19267	15348	12092
20°	18902	12333	7742
25°	18434	9039	3976
30°	17886	5909	1299
35°	17342	3277	756
40°	16716	1318	420
45°	16098	876	163
50°	15386	501	71
55°	14682	241	40
60°	13906	91	0
65°	13086	54	0
70°	11744	66	0
75°	10109	88	0
80°	7670	0	0
85°	3152	261	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16098 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	9.9
10°-20°	219.5	22.9
20°-30°	222.9	23.2
30°-40°	167.2	17.4
40°-50°	117.1	12.2
50°-60°	71.7	7.5
60°-70°	42.7	4.5
70°-80°	19.7	2.1
80°-90°	3.5	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°	536.8	56.0
0°-40°	704.0	73.4
0°-60°	892.8	93.1
0°-90°	958.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	958.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1054	1054	1054	1054	1054	
5°	1037	1046	1020	1000	1000	98
15°	982	929	782	662	616	277
25°	882	727	432	247	190	406
35°	750	488	142	42	33	469
45°	601	258	33	10	6	463
55°	444	79	7	2	1	397
65°	292	23	1	1	0	288
75°	138	2	1	1	0	147
85°	14	0	1	1	0	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1053.8	1053.8	1053.8	1053.8	1053.8
2.5°	1041.7	1057.4	1042.9	1040.5	1041.7
5°	1036.8	1046.5	1019.9	1000.5	1000.5
7.5°	1028.3	1028.3	978.7	938.7	926.6
10°	1016.2	1002.9	921.7	857.6	839.4
12.5°	1000.5	969.0	855.1	764.3	735.2
15°	982.3	929.0	782.5	662.5	616.5
17.5°	961.7	884.2	701.3	552.3	499.0
20°	937.5	835.8	611.7	439.7	384.0
22.5°	910.8	782.5	520.8	339.1	279.8
25°	881.8	726.7	432.4	247.1	190.2
27.5°	851.5	668.6	351.3	169.6	116.3
30°	817.6	608.0	270.1	100.5	59.4
32.5°	784.9	549.9	202.3	54.5	43.6
35°	749.8	488.1	141.7	42.4	32.7
37.5°	713.4	430.0	87.2	31.5	24.2
40°	675.9	370.6	53.3	23.0	17.0
42.5°	639.5	314.9	42.4	15.7	10.9
45°	600.8	258.0	32.7	9.7	6.1
47.5°	560.8	205.9	24.2	6.1	3.6
50°	522.0	159.9	17.0	3.6	2.4
52.5°	483.3	117.5	10.9	2.4	1.2
55°	444.5	78.7	7.3	2.4	1.2
57.5°	405.8	55.7	4.8	1.2	1.2
60°	367.0	43.6	2.4	1.2	0.0
62.5°	330.7	33.9	2.4	1.2	1.2
65°	291.9	23.0	1.2	1.2	0.0
67.5°	250.7	14.5	1.2	1.2	0.0
70°	212.0	8.5	1.2	1.2	0.0
72.5°	174.4	4.8	1.2	1.2	0.0
75°	138.1	2.4	1.2	1.2	0.0
77.5°	103.0	1.2	0.0	1.2	0.0
80°	70.3	0.0	0.0	1.2	0.0
82.5°	41.2	0.0	0.0	1.2	0.0
85°	14.5	0.0	1.2	1.2	0.0
87.5°	0.0	0.0	1.2	1.2	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	16.61	17.87	16.98	18.19	18.50	0.00	0.00	0.00	0.00	0.00
	3H	20.35	21.47	20.74	21.80	22.17	0.00	0.00	0.00	0.00	0.00
	4H	21.67	22.71	22.07	23.06	23.44	0.00	0.00	0.00	0.00	0.00
	6H	22.52	23.48	22.94	23.85	24.24	0.00	0.00	0.00	0.00	0.00
	8H	22.73	23.64	23.17	24.03	24.44	0.00	0.00	0.00	0.00	0.00
	12H	22.80	23.66	23.23	24.05	24.48	0.00	0.00	0.00	0.00	0.00
4H	2H	16.37	17.41	16.77	17.76	18.14	0.00	0.00	0.00	0.00	0.00
	3H	20.11	20.96	20.52	21.37	21.77	0.00	0.00	0.00	0.00	0.00
	4H	21.40	22.17	21.84	22.59	23.03	0.00	0.00	0.00	0.00	0.00
	6H	22.32	22.98	22.79	23.43	23.90	0.00	0.00	0.00	0.00	0.00
	8H	22.58	23.19	23.05	23.64	24.11	0.00	0.00	0.00	0.00	0.00
	12H	22.68	23.22	23.17	23.71	24.18	0.00	0.00	0.00	0.00	0.00
8H	4H	21.26	21.87	21.73	22.32	22.79	0.00	0.00	0.00	0.00	0.00
	6H	22.16	22.66	22.67	23.16	23.64	0.00	0.00	0.00	0.00	0.00
	8H	22.42	22.86	22.94	23.38	23.87	0.00	0.00	0.00	0.00	0.00
	12H	22.54	22.93	23.05	23.42	23.99	0.00	0.00	0.00	0.00	0.00
12H	4H	21.21	21.75	21.70	22.23	22.71	0.00	0.00	0.00	0.00	0.00
	6H	22.10	22.54	22.62	23.06	23.55	0.00	0.00	0.00	0.00	0.00
	8H	22.37	22.76	22.89	23.26	23.83	0.00	0.00	0.00	0.00	0.00