

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: P1055200

Luminaire Tested: S122R3DR-S485D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055200
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-S485D835-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

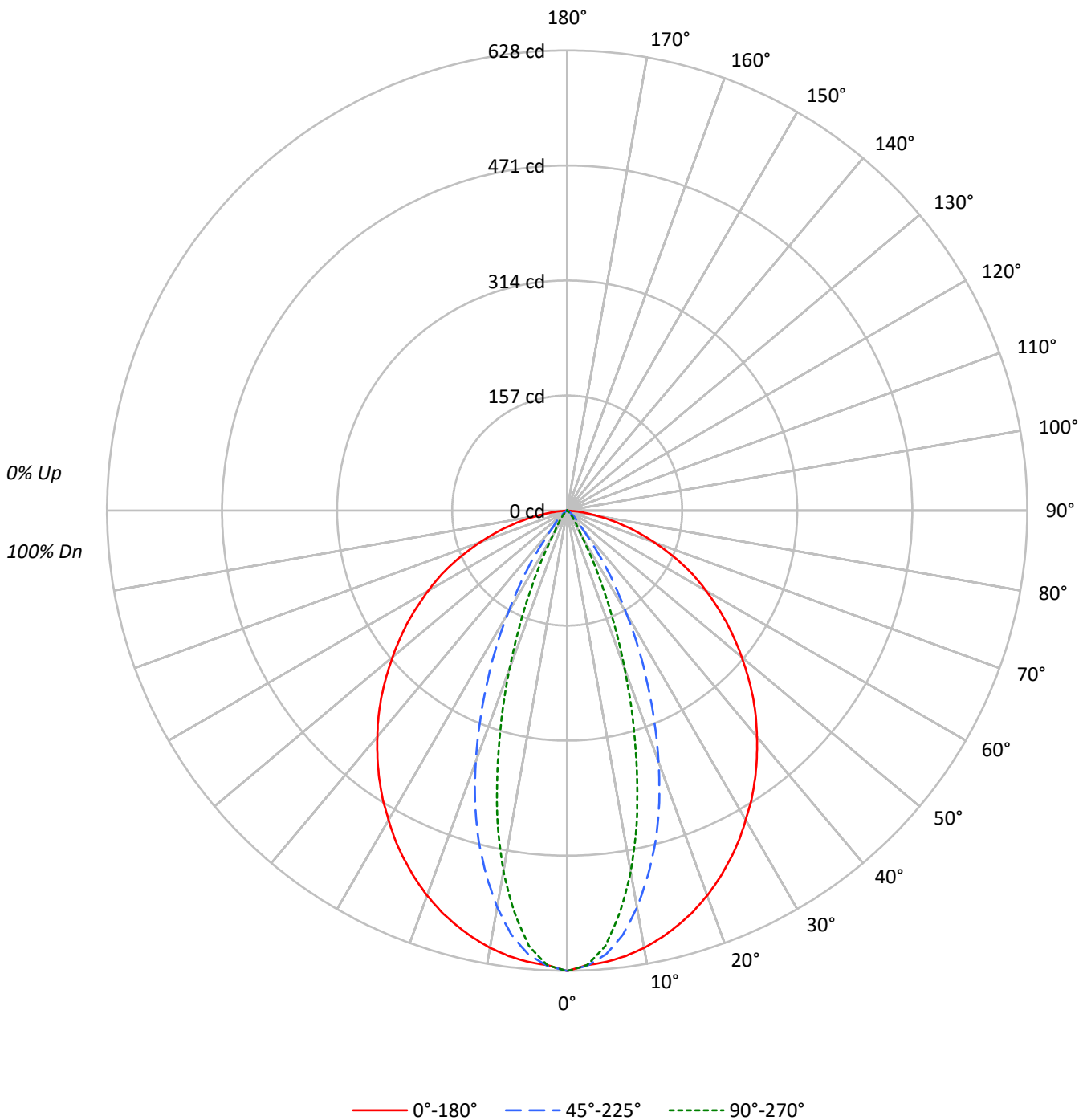
Lumens per Lamp: N/A
Luminaire Lumens: 571.5 lumens
Efficiency: N/A
Efficacy: 29.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	63	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	48	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11904	11904	11904
5°	11757	11563	11344
10°	11656	10573	9627
15°	11488	9150	7210
20°	11268	7353	4615
25°	10989	5389	2371
30°	10663	3522	774
35°	10338	1954	451
40°	9967	786	250
45°	9597	522	96
50°	9172	298	41
55°	8753	142	23
60°	8291	53	0
65°	7800	31	0
70°	7002	39	0
75°	6024	51	0
80°	4571	0	0
85°	1891	152	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9597 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.3	9.9
10°-20°	130.9	22.9
20°-30°	132.9	23.2
30°-40°	99.7	17.4
40°-50°	69.8	12.2
50°-60°	42.7	7.5
60°-70°	25.4	4.5
70°-80°	11.7	2.1
80°-90°	2.1	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°	320.1	56.0
0°-40°	419.8	73.4
0°-60°	532.3	93.1
0°-90°	571.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	571.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	618	624	608	596	596	59
15°	586	554	466	395	368	165
25°	526	433	258	147	113	242
35°	447	291	84	25	20	279
45°	358	154	20	6	4	276
55°	265	47	4	1	1	237
65°	174	14	1	1	0	171
75°	82	1	1	1	0	87
85°	9	0	1	1	0	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	628.3	628.3	628.3	628.3	628.3
2.5°	621.0	630.4	621.8	620.3	621.0
5°	618.2	623.9	608.0	596.5	596.5
7.5°	613.1	613.1	583.5	559.7	552.4
10°	605.9	597.9	549.6	511.3	500.4
12.5°	596.5	577.7	509.8	455.7	438.3
15°	585.7	553.9	466.5	395.0	367.6
17.5°	573.4	527.2	418.1	329.3	297.5
20°	558.9	498.3	364.7	262.1	228.9
22.5°	543.1	466.5	310.5	202.2	166.8
25°	525.7	433.3	257.8	147.3	113.4
27.5°	507.7	398.6	209.4	101.1	69.3
30°	487.4	362.5	161.0	59.9	35.4
32.5°	468.0	327.9	120.6	32.5	26.0
35°	447.0	291.0	84.5	25.3	19.5
37.5°	425.3	256.4	52.0	18.8	14.4
40°	403.0	221.0	31.8	13.7	10.1
42.5°	381.3	187.8	25.3	9.4	6.5
45°	358.2	153.8	19.5	5.8	3.6
47.5°	334.4	122.8	14.4	3.6	2.2
50°	311.2	95.3	10.1	2.2	1.4
52.5°	288.1	70.0	6.5	1.4	0.7
55°	265.0	46.9	4.3	1.4	0.7
57.5°	241.9	33.2	2.9	0.7	0.7
60°	218.8	26.0	1.4	0.7	0.0
62.5°	197.1	20.2	1.4	0.7	0.7
65°	174.0	13.7	0.7	0.7	0.0
67.5°	149.5	8.7	0.7	0.7	0.0
70°	126.4	5.1	0.7	0.7	0.0
72.5°	104.0	2.9	0.7	0.7	0.0
75°	82.3	1.4	0.7	0.7	0.0
77.5°	61.4	0.7	0.0	0.7	0.0
80°	41.9	0.0	0.0	0.7	0.0
82.5°	24.6	0.0	0.0	0.7	0.0
85°	8.7	0.0	0.7	0.7	0.0
87.5°	0.0	0.0	0.7	0.7	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	14.82	16.08	15.18	16.39	16.70	0.00	0.00	0.00	0.00	0.00
	3H	18.56	19.68	18.94	20.01	20.37	0.00	0.00	0.00	0.00	0.00
	4H	19.87	20.91	20.27	21.26	21.65	0.00	0.00	0.00	0.00	0.00
	6H	20.72	21.68	21.14	22.05	22.45	0.00	0.00	0.00	0.00	0.00
	8H	20.94	21.84	21.37	22.23	22.64	0.00	0.00	0.00	0.00	0.00
	12H	21.00	21.87	21.44	22.25	22.68	0.00	0.00	0.00	0.00	0.00
4H	2H	14.57	15.61	14.97	15.96	16.35	0.00	0.00	0.00	0.00	0.00
	3H	18.31	19.17	18.73	19.57	19.97	0.00	0.00	0.00	0.00	0.00
	4H	19.61	20.37	20.04	20.79	21.23	0.00	0.00	0.00	0.00	0.00
	6H	20.53	21.18	20.99	21.63	22.10	0.00	0.00	0.00	0.00	0.00
	8H	20.79	21.40	21.26	21.85	22.32	0.00	0.00	0.00	0.00	0.00
	12H	20.89	21.43	21.38	21.91	22.39	0.00	0.00	0.00	0.00	0.00
8H	4H	19.46	20.08	19.93	20.52	20.99	0.00	0.00	0.00	0.00	0.00
	6H	20.36	20.86	20.87	21.36	21.84	0.00	0.00	0.00	0.00	0.00
	8H	20.62	21.07	21.15	21.58	22.08	0.00	0.00	0.00	0.00	0.00
	12H	20.74	21.13	21.26	21.63	22.20	0.00	0.00	0.00	0.00	0.00
12H	4H	19.41	19.95	19.90	20.44	20.91	0.00	0.00	0.00	0.00	0.00
	6H	20.30	20.75	20.83	21.26	21.76	0.00	0.00	0.00	0.00	0.00
	8H	20.58	20.97	21.10	21.46	22.04	0.00	0.00	0.00	0.00	0.00