

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: P1055345

Luminaire Tested: S122R3DR-H485D927-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055345
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-H485D927-X4F0-XX-UDD-FLL-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

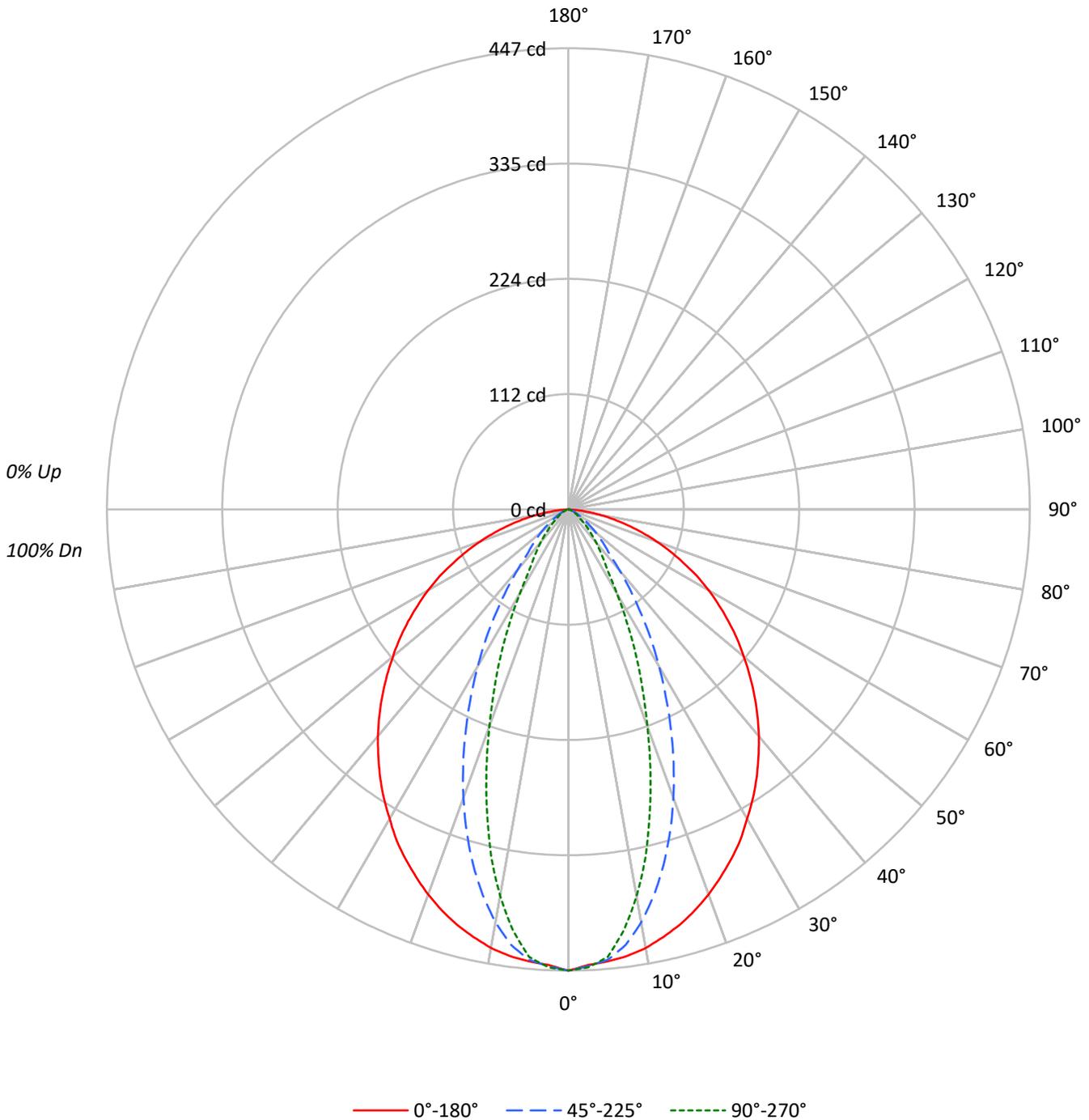
Lumens per Lamp: N/A
Luminaire Lumens: 512.2 lumens
Efficiency: N/A
Efficacy: 29.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8469	8469	8469
5°	8364	8334	8282
10°	8303	7818	7324
15°	8175	6994	5974
20°	8006	5996	4506
25°	7810	4913	3217
30°	7574	3835	2050
35°	7348	2812	1369
40°	7098	1897	1029
45°	6824	1334	734
50°	6537	1017	516
55°	6259	707	380
60°	5957	477	311
65°	5523	345	247
70°	5035	271	210
75°	4370	242	161
80°	3470	175	175
85°	1913	239	109

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6824 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	8.0
10°-20°	100.3	19.6
20°-30°	114.6	22.4
30°-40°	97.2	19.0
40°-50°	72.5	14.2
50°-60°	46.9	9.1
60°-70°	26.1	5.1
70°-80°	11.5	2.2
80°-90°	2.3	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°	255.7	49.9
0°-40°	352.9	68.9
0°-60°	472.3	92.2
0°-90°	512.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	512.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	447	447	447	447	447	
5°	440	445	438	434	436	42
15°	417	406	357	319	305	117
25°	374	330	235	172	154	172
35°	318	239	122	66	59	199
45°	255	151	50	32	27	197
55°	190	72	21	13	12	169
65°	123	26	8	6	6	123
75°	60	6	3	3	2	64
85°	9	0	1	0	0	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	447.0	447.0	447.0	447.0	447.0
2.5°	442.0	448.6	443.1	443.1	444.2
5°	439.8	445.3	438.2	433.8	435.5
7.5°	436.6	440.4	425.6	412.5	411.4
10°	431.6	433.3	406.4	386.2	380.7
12.5°	424.5	420.7	382.9	354.4	345.1
15°	416.8	406.4	356.6	318.8	304.6
17.5°	407.5	388.9	327.6	281.5	264.0
20°	397.1	370.8	297.4	242.7	223.5
22.5°	385.6	350.6	266.2	206.0	186.8
25°	373.6	329.7	235.0	172.0	153.9
27.5°	361.0	307.8	204.3	141.3	121.6
30°	346.2	285.4	175.3	111.7	93.7
32.5°	332.5	261.8	148.4	86.5	71.2
35°	317.7	239.4	121.6	66.3	59.2
37.5°	302.4	216.9	98.0	55.9	49.8
40°	287.0	194.5	76.7	47.1	41.6
42.5°	271.1	172.5	59.2	39.4	34.0
45°	254.7	151.2	49.8	32.3	27.4
47.5°	238.3	129.8	41.6	25.7	21.9
50°	221.8	109.6	34.5	20.3	17.5
52.5°	206.0	90.4	27.4	16.4	14.2
55°	189.5	71.8	21.4	13.1	11.5
57.5°	173.1	55.9	16.4	11.0	9.9
60°	157.2	42.2	12.6	8.8	8.2
62.5°	140.8	34.0	9.9	7.1	6.6
65°	123.2	26.3	7.7	6.0	5.5
67.5°	107.4	19.2	6.0	4.9	4.4
70°	90.9	13.1	4.9	4.4	3.8
72.5°	75.0	8.2	3.8	3.3	3.3
75°	59.7	5.5	3.3	2.7	2.2
77.5°	45.5	3.3	2.2	2.2	1.6
80°	31.8	2.2	1.6	1.6	1.6
82.5°	19.7	1.6	1.1	1.1	1.1
85°	8.8	0.5	1.1	0.5	0.5
87.5°	1.6	0.5	0.5	0.5	0.5
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	15.68	17.00	16.04	17.31	17.62	2.01	3.33	2.38	3.64	3.96
	3H	18.14	19.32	18.52	19.65	20.01	2.85	4.02	3.23	4.35	4.72
	4H	19.10	20.19	19.50	20.54	20.93	3.12	4.22	3.53	4.57	4.95
	6H	19.79	20.79	20.20	21.16	21.56	3.30	4.31	3.72	4.68	5.07
	8H	19.98	20.93	20.41	21.33	21.73	3.38	4.33	3.81	4.72	5.12
	12H	20.07	20.97	20.50	21.36	21.79	3.40	4.31	3.83	4.69	5.12
4H	2H	15.46	16.55	15.86	16.90	17.29	2.58	3.68	2.99	4.03	4.41
	3H	17.94	18.84	18.36	19.24	19.65	3.61	4.50	4.02	4.90	5.31
	4H	18.89	19.69	19.32	20.11	20.55	3.97	4.77	4.40	5.19	5.63
	6H	19.64	20.33	20.11	20.78	21.25	4.25	4.94	4.71	5.38	5.85
	8H	19.89	20.53	20.36	20.98	21.45	4.34	4.99	4.81	5.43	5.90
	12H	20.01	20.58	20.50	21.07	21.54	4.38	4.95	4.87	5.43	5.91
8H	4H	18.75	19.40	19.22	19.85	20.32	4.34	4.98	4.80	5.43	5.90
	6H	19.49	20.02	20.00	20.52	21.00	4.68	5.20	5.18	5.70	6.18
	8H	19.74	20.21	20.26	20.72	21.22	4.82	5.29	5.34	5.80	6.30
	12H	19.89	20.30	20.40	20.80	21.37	4.89	5.30	5.41	5.80	6.37
12H	4H	18.71	19.28	19.20	19.76	20.24	4.46	5.03	4.94	5.51	5.98
	6H	19.43	19.90	19.96	20.42	20.91	4.80	5.27	5.32	5.79	6.28
	8H	19.70	20.11	20.21	20.61	21.18	4.98	5.39	5.49	5.89	6.46