

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: P1055334

Luminaire Tested: S122R3DR-H485D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055334
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H485D830-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

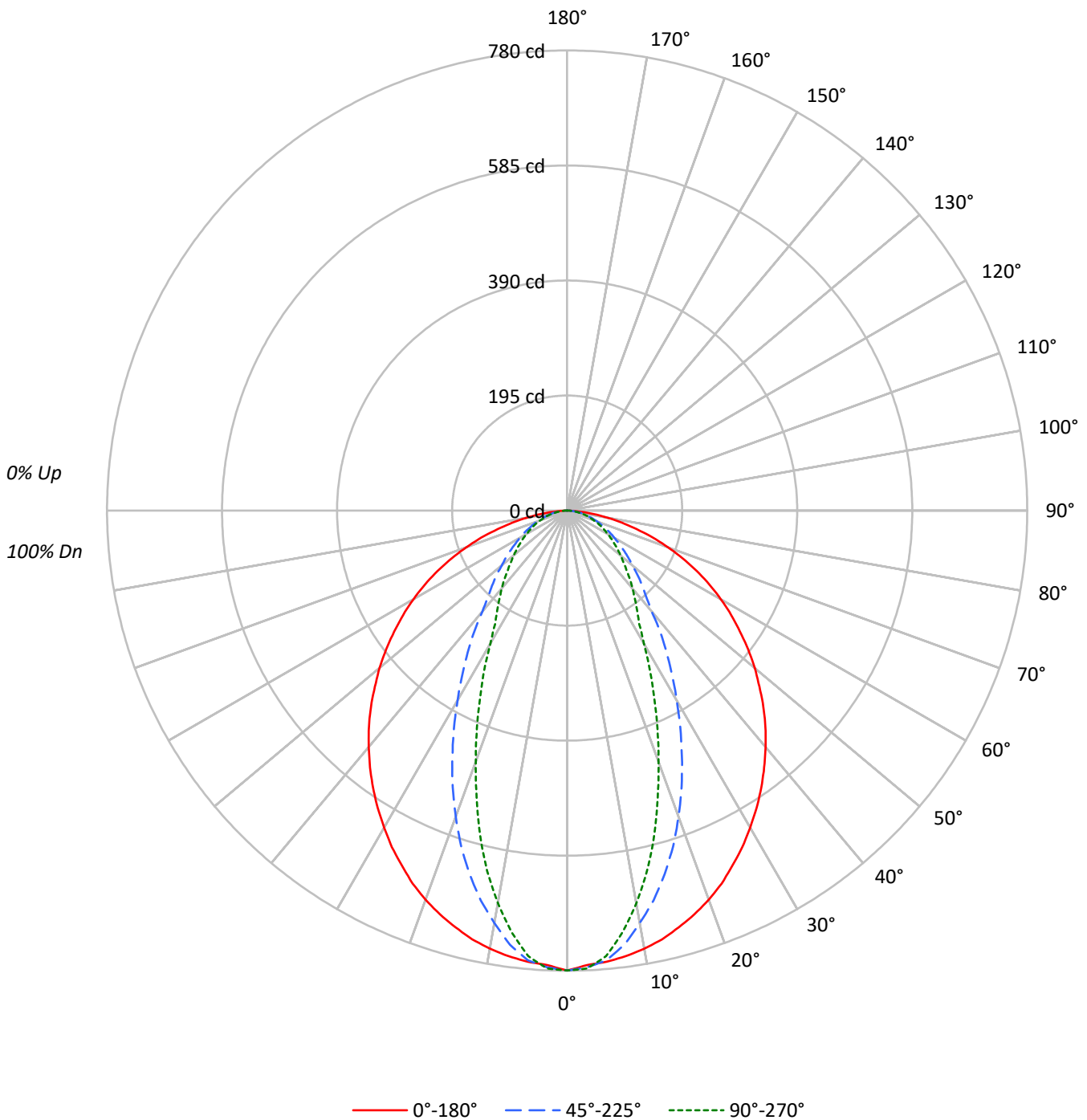
Lumens per Lamp: N/A
Luminaire Lumens: 1178.9 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89					87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34					32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14768	14768	14768
5°	14600	14551	14416
10°	14506	13653	13001
15°	14342	12514	11186
20°	14152	11129	9131
25°	13870	9618	7289
30°	13572	8127	5688
35°	13264	6797	4778
40°	12942	5513	4256
45°	12606	4820	3807
50°	12235	4265	3478
55°	11819	3855	3230
60°	11409	3505	3012
65°	10867	3214	2833
70°	10071	2997	2670
75°	8923	2716	2525
80°	7605	2564	2346
85°	5239	2261	2130

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12606 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.4	6.1
10°-20°	180.3	15.3
20°-30°	222.2	18.8
30°-40°	213.2	18.1
40°-50°	183.9	15.6
50°-60°	142.7	12.1
60°-70°	97.7	8.3
70°-80°	53.0	4.5
80°-90°	14.5	1.2
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°	474.0	40.2
0°-40°	687.2	58.3
0°-60°	1013.7	86.0
0°-90°	1178.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1178.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	768	779	765	755	758	73
15°	731	709	638	586	570	206
25°	664	592	460	375	349	306
35°	574	455	294	219	207	359
45°	470	317	180	149	142	363
55°	358	190	117	101	98	320
65°	242	104	72	65	63	239
75°	122	48	37	35	34	131
85°	24	12	10	10	10	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.5	779.5	779.5	779.5	779.5
2.5°	771.0	784.0	774.9	774.9	776.9
5°	767.7	778.8	765.1	755.3	758.0
7.5°	761.9	769.7	742.3	721.5	720.8
10°	754.0	754.7	709.7	682.4	675.8
12.5°	744.3	733.8	676.5	635.4	625.7
15°	731.2	709.1	638.0	585.9	570.3
17.5°	717.5	683.7	597.0	531.8	510.3
20°	701.9	653.0	552.0	477.7	452.9
22.5°	684.3	623.7	507.0	425.6	399.5
25°	663.5	592.4	460.1	375.4	348.7
27.5°	643.2	560.5	415.1	331.1	303.7
30°	620.4	525.9	371.5	288.7	260.0
32.5°	597.6	490.7	331.1	248.3	226.8
35°	573.5	454.9	293.9	219.0	206.6
37.5°	548.7	419.7	258.7	199.4	188.3
40°	523.3	384.5	222.9	180.5	172.1
42.5°	497.3	350.0	198.1	164.9	157.1
45°	470.5	316.7	179.9	148.6	142.1
47.5°	441.9	283.5	162.3	134.9	129.0
50°	415.1	251.6	144.7	122.5	118.0
52.5°	386.5	220.3	130.3	111.4	107.5
55°	357.8	190.3	116.7	101.0	97.8
57.5°	329.8	161.6	103.6	91.2	88.6
60°	301.1	138.8	92.5	82.1	79.5
62.5°	271.8	120.6	82.1	73.6	71.0
65°	242.4	103.6	71.7	65.2	63.2
67.5°	211.8	87.3	62.6	57.4	56.0
70°	181.8	73.0	54.1	49.5	48.2
72.5°	152.5	59.3	45.6	42.4	41.1
75°	121.9	47.6	37.1	35.2	34.5
77.5°	95.2	37.1	30.0	28.7	28.0
80°	69.7	27.4	23.5	22.2	21.5
82.5°	46.3	18.9	16.9	16.3	15.6
85°	24.1	11.7	10.4	10.4	9.8
87.5°	7.8	5.2	5.2	5.2	4.6
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	18.96	20.43	19.33	20.74	21.06	13.77	15.23	14.13	15.55	15.86
	3H	21.29	22.61	21.67	22.94	23.30	15.41	16.73	15.79	17.06	17.42
	4H	22.19	23.42	22.59	23.77	24.15	16.05	17.28	16.45	17.63	18.01
	6H	22.85	23.99	23.26	24.36	24.75	16.54	17.68	16.96	18.05	18.44
	8H	23.06	24.14	23.49	24.53	24.94	16.71	17.80	17.14	18.19	18.59
	12H	23.17	24.21	23.61	24.59	25.02	16.83	17.87	17.26	18.25	18.68
4H	2H	18.98	20.21	19.38	20.56	20.94	14.48	15.72	14.88	16.07	16.45
	3H	21.39	22.42	21.80	22.82	23.22	16.33	17.36	16.74	17.76	18.16
	4H	22.32	23.24	22.75	23.66	24.10	17.08	18.00	17.51	18.42	18.86
	6H	23.10	23.90	23.56	24.34	24.81	17.69	18.50	18.15	18.94	19.40
	8H	23.37	24.12	23.83	24.56	25.03	17.91	18.66	18.37	19.10	19.57
	12H	23.55	24.21	24.03	24.69	25.17	18.07	18.74	18.55	19.22	19.69
8H	4H	22.31	23.06	22.78	23.51	23.98	17.46	18.21	17.92	18.65	19.12
	6H	23.12	23.74	23.62	24.23	24.71	18.20	18.81	18.69	19.31	19.78
	8H	23.42	23.98	23.94	24.49	24.98	18.49	19.05	19.01	19.56	20.05
	12H	23.65	24.14	24.17	24.64	25.20	18.74	19.22	19.25	19.72	20.28
12H	4H	22.29	22.96	22.78	23.44	23.91	17.51	18.18	18.00	18.66	19.13
	6H	23.10	23.65	23.61	24.16	24.65	18.28	18.84	18.80	19.35	19.84
	8H	23.43	23.92	23.94	24.41	24.98	18.64	19.13	19.15	19.62	20.19