

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: P1055337

Luminaire Tested: S122R3DR-H485D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055337
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-H485D835-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

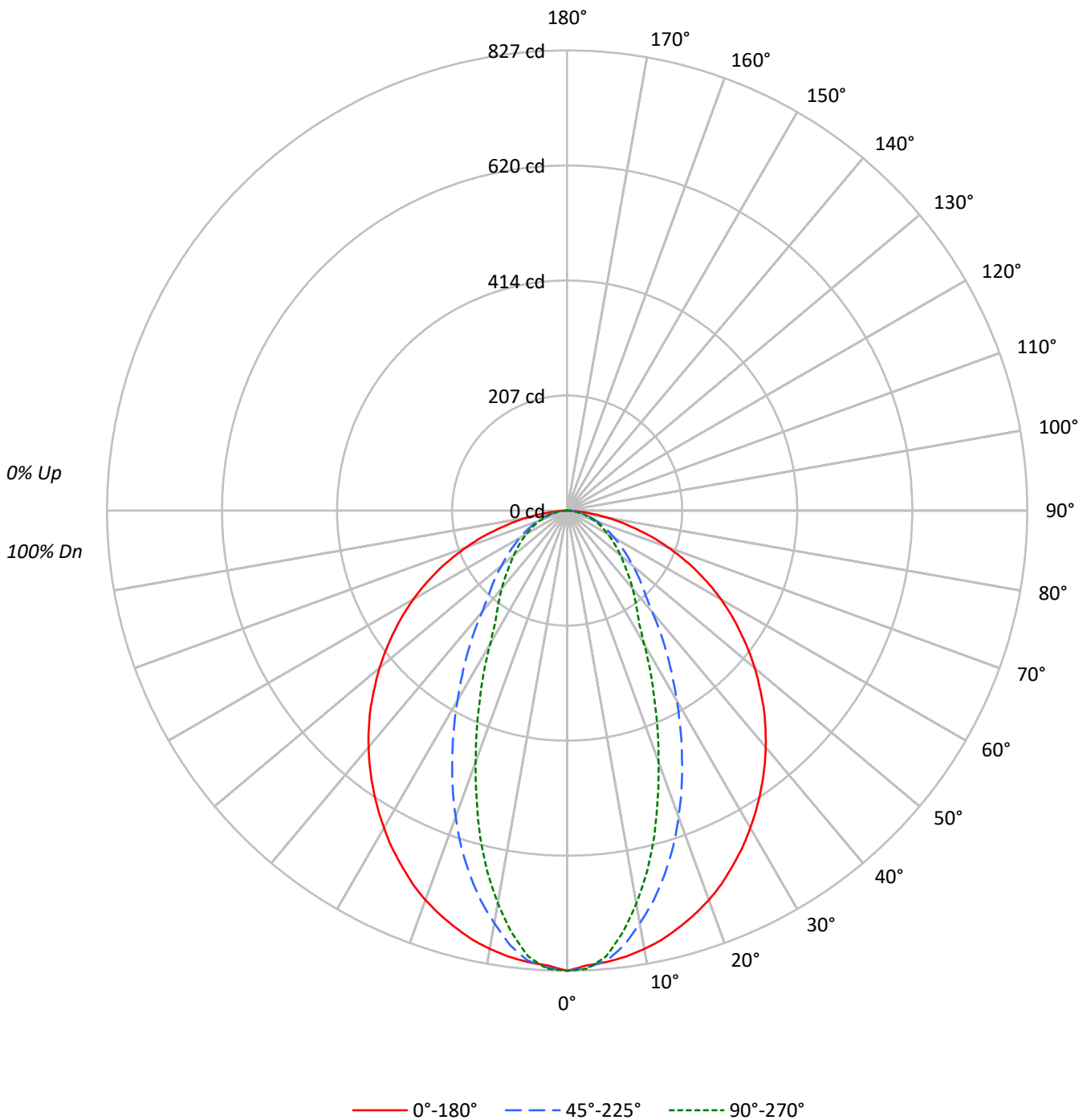
Lumens per Lamp: N/A
Luminaire Lumens: 1250.8 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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	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°	15668	15668	15668
5°	15490	15439	15294
10°	15390	14486	13794
15°	15217	13277	11867
20°	15014	11809	9690
25°	14715	10206	7733
30°	14401	8622	6036
35°	14074	7212	5070
40°	13731	5849	4514
45°	13375	5112	4038
50°	12984	4524	3690
55°	12539	4089	3425
60°	12106	3721	3198
65°	11530	3412	3008
70°	10685	3180	2836
75°	9465	2884	2679
80°	8074	2717	2488
85°	5565	2413	2261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13375 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	6.1
10°-20°	191.3	15.3
20°-30°	235.8	18.8
30°-40°	226.2	18.1
40°-50°	195.1	15.6
50°-60°	151.4	12.1
60°-70°	103.6	8.3
70°-80°	56.3	4.5
80°-90°	15.4	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°	502.9	40.2
0°-40°	729.1	58.3
0°-60°	1075.5	86.0
0°-90°	1250.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1250.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	814	826	812	801	804	77
15°	776	752	677	622	605	219
25°	704	628	488	398	370	324
35°	608	483	312	232	219	381
45°	499	336	191	158	151	385
55°	380	202	124	107	104	340
65°	257	110	76	69	67	254
75°	129	50	39	37	37	139
85°	26	12	11	11	10	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	827.0	827.0	827.0	827.0	827.0
2.5°	818.0	831.8	822.1	822.1	824.2
5°	814.5	826.3	811.8	801.4	804.2
7.5°	808.3	816.6	787.6	765.4	764.7
10°	800.0	800.7	753.0	723.9	717.0
12.5°	789.6	778.6	717.7	674.2	663.8
15°	775.8	752.3	676.9	621.6	605.0
17.5°	761.3	725.3	633.4	564.2	541.4
20°	744.7	692.8	585.7	506.8	480.6
22.5°	726.0	661.7	537.9	451.5	423.9
25°	703.9	628.5	488.2	398.3	369.9
27.5°	682.5	594.6	440.5	351.3	322.2
30°	658.3	558.0	394.1	306.3	275.9
32.5°	634.1	520.7	351.3	263.4	240.6
35°	608.5	482.6	311.8	232.3	219.2
37.5°	582.2	445.3	274.5	211.6	199.8
40°	555.2	408.0	236.5	191.5	182.5
42.5°	527.6	371.3	210.2	174.9	166.6
45°	499.2	336.0	190.8	157.7	150.7
47.5°	468.8	300.8	172.2	143.1	136.9
50°	440.5	266.9	153.5	130.0	125.2
52.5°	410.0	233.7	138.3	118.2	114.1
55°	379.6	201.9	123.8	107.2	103.7
57.5°	349.9	171.5	109.9	96.8	94.0
60°	319.5	147.3	98.2	87.1	84.4
62.5°	288.3	127.9	87.1	78.1	75.4
65°	257.2	109.9	76.1	69.1	67.1
67.5°	224.7	92.7	66.4	60.8	59.5
70°	192.9	77.4	57.4	52.6	51.2
72.5°	161.8	62.9	48.4	44.9	43.6
75°	129.3	50.5	39.4	37.3	36.6
77.5°	101.0	39.4	31.8	30.4	29.7
80°	74.0	29.0	24.9	23.5	22.8
82.5°	49.1	20.1	18.0	17.3	16.6
85°	25.6	12.4	11.1	11.1	10.4
87.5°	8.3	5.5	5.5	5.5	4.8
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	19.17	20.64	19.53	20.95	21.27	13.97	15.44	14.34	15.76	16.07
	3H	21.50	22.82	21.88	23.14	23.51	15.62	16.94	16.00	17.27	17.63
	4H	22.39	23.63	22.79	23.98	24.36	16.26	17.49	16.66	17.84	18.22
	6H	23.06	24.20	23.47	24.56	24.96	16.75	17.89	17.16	18.26	18.65
	8H	23.27	24.35	23.69	24.74	25.14	16.92	18.00	17.35	18.39	18.80
	12H	23.38	24.42	23.81	24.80	25.23	17.04	18.07	17.47	18.46	18.89
4H	2H	19.19	20.42	19.59	20.77	21.15	14.69	15.92	15.09	16.27	16.65
	3H	21.60	22.62	22.01	23.02	23.42	16.54	17.56	16.95	17.96	18.37
	4H	22.53	23.45	22.96	23.87	24.31	17.28	18.21	17.72	18.62	19.06
	6H	23.31	24.11	23.76	24.55	25.01	17.90	18.70	18.36	19.14	19.61
	8H	23.58	24.33	24.04	24.77	25.24	18.11	18.86	18.58	19.31	19.78
	12H	23.75	24.42	24.24	24.90	25.37	18.28	18.95	18.76	19.42	19.90
8H	4H	22.52	23.27	22.98	23.71	24.18	17.66	18.41	18.13	18.86	19.33
	6H	23.33	23.95	23.83	24.44	24.92	18.40	19.02	18.90	19.51	19.99
	8H	23.63	24.18	24.15	24.69	25.18	18.70	19.25	19.21	19.76	20.25
	12H	23.86	24.35	24.37	24.84	25.41	18.94	19.43	19.45	19.92	20.49
12H	4H	22.50	23.17	22.98	23.65	24.12	17.72	18.39	18.20	18.87	19.34
	6H	23.30	23.86	23.82	24.37	24.86	18.49	19.04	19.00	19.55	20.04
	8H	23.64	24.13	24.15	24.62	25.19	18.84	19.33	19.35	19.82	20.39