

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: P1439648

Luminaire Tested: S122DR-H485D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439648
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-H485D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

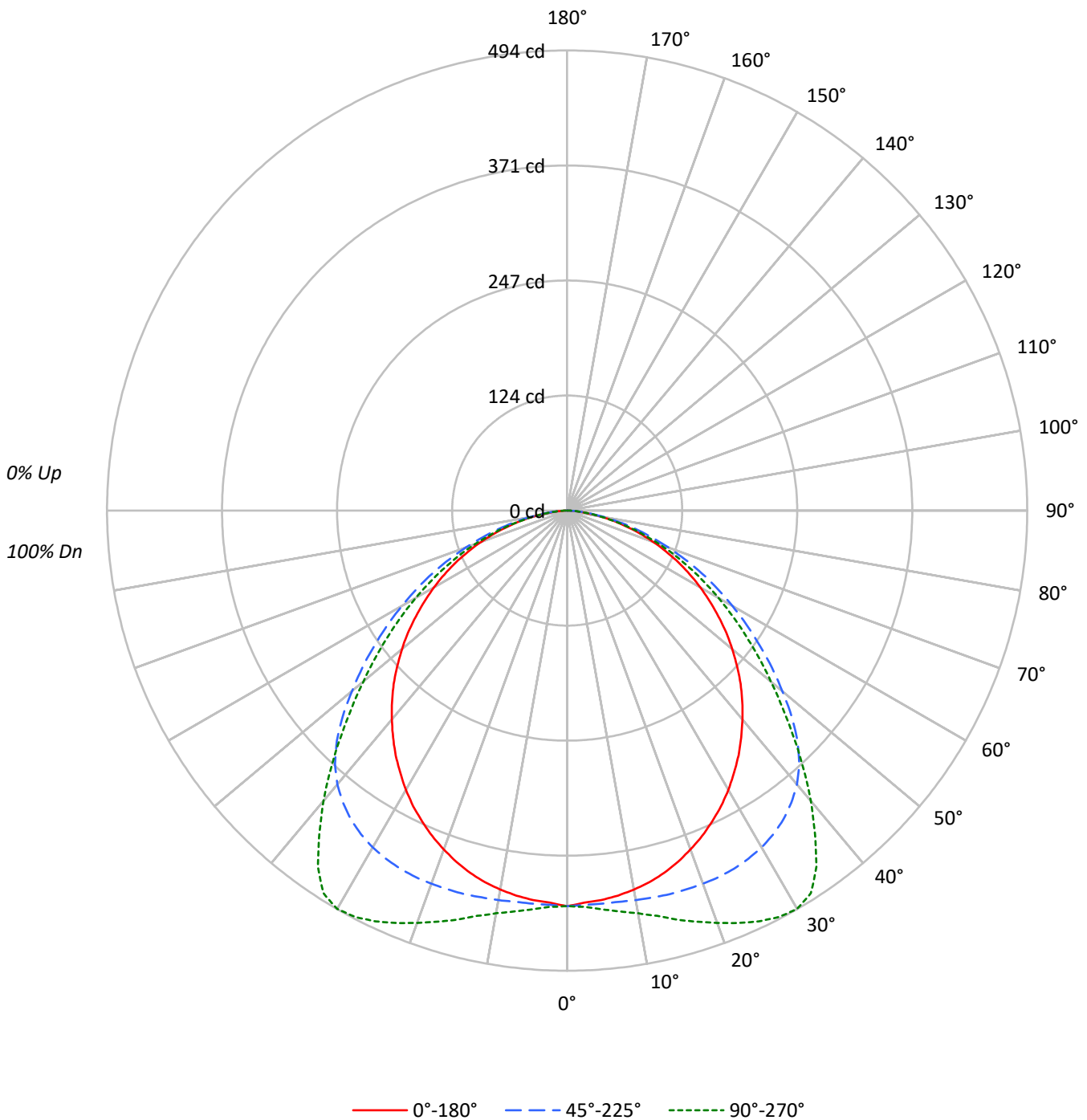
Lumens per Lamp: N/A
Luminaire Lumens: 1306.1 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8046	8046	8046
5°	7982	8056	8170
10°	7947	8170	8446
15°	7897	8362	8915
20°	7805	8595	9496
25°	7699	8866	10170
30°	7574	9134	10801
35°	7420	9362	10792
40°	7239	9492	10066
45°	7057	9367	9217
50°	6820	8887	8415
55°	6547	8337	7733
60°	6256	7764	7116
65°	5918	7155	6487
70°	5445	6392	5811
75°	4809	5541	5014
80°	3971	4397	3971
85°	2630	2891	2761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9439 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.6	3.1
10°-20°	121.3	9.3
20°-30°	196.8	15.1
30°-40°	249.0	19.1
40°-50°	249.4	19.1
50°-60°	208.9	16.0
60°-70°	147.2	11.3
70°-80°	75.9	5.8
80°-90°	16.8	1.3
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°	358.7	27.5
0°-40°	607.8	46.5
0°-60°	1066.1	81.6
0°-90°	1306.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1306.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	425	425	425	425	425	
5°	420	427	424	426	430	40
15°	403	414	426	443	454	113
25°	368	388	424	466	486	170
35°	321	347	405	457	467	200
45°	263	291	350	352	344	203
55°	198	222	252	242	234	177
65°	132	147	160	150	145	130
75°	66	72	76	70	68	70
85°	12	13	13	13	13	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	424.7	424.7	424.7	424.7	424.7
2.5°	421.3	428.0	423.6	424.1	425.8
5°	419.7	426.9	423.6	425.8	429.6
7.5°	416.9	424.7	423.6	428.0	434.0
10°	413.1	421.9	424.7	432.4	439.0
12.5°	408.6	418.0	425.2	437.4	445.6
15°	402.6	414.2	426.3	443.4	454.5
17.5°	395.4	409.2	426.3	450.1	462.8
20°	387.1	403.1	426.3	455.6	471.0
22.5°	378.3	395.9	425.8	460.6	479.3
25°	368.3	388.2	424.1	465.5	486.5
27.5°	357.8	379.4	421.3	469.4	492.0
30°	346.2	369.4	417.5	471.0	493.7
32.5°	333.5	358.9	412.0	467.7	487.1
35°	320.8	346.8	404.8	457.2	466.6
37.5°	307.0	334.1	395.4	436.8	436.8
40°	292.7	320.3	383.8	408.6	407.0
42.5°	278.3	305.9	368.9	381.0	375.5
45°	263.4	291.0	349.6	352.3	344.0
47.5°	247.4	274.5	326.9	323.1	313.7
50°	231.4	257.9	301.5	294.9	285.5
52.5°	215.4	240.8	277.2	267.8	259.5
55°	198.2	222.5	252.4	241.9	234.1
57.5°	181.7	204.3	228.6	217.0	210.4
60°	165.1	185.5	204.9	193.8	187.8
62.5°	148.5	166.2	182.2	171.2	165.7
65°	132.0	146.9	159.6	149.7	144.7
67.5°	114.9	128.1	137.0	128.1	124.8
70°	98.3	108.8	115.4	107.7	104.9
72.5°	81.7	90.6	95.0	88.9	86.1
75°	65.7	72.3	75.7	70.1	68.5
77.5°	50.3	55.2	56.9	53.0	50.8
80°	36.4	39.2	40.3	37.6	36.4
82.5°	22.6	24.9	26.0	23.7	23.2
85°	12.1	13.3	13.3	13.3	12.7
87.5°	4.4	5.5	5.5	5.5	5.0
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	18.73	20.34	19.09	20.66	20.97	19.24	20.85	19.61	21.17	21.48
	3H	20.30	21.75	20.68	22.08	22.44	20.71	22.16	21.09	22.49	22.85
	4H	20.84	22.20	21.23	22.55	22.93	21.20	22.57	21.60	22.92	23.29
	6H	21.18	22.44	21.59	22.81	23.20	21.50	22.77	21.91	23.13	23.52
	8H	21.26	22.47	21.69	22.86	23.26	21.58	22.78	22.00	23.17	23.57
	12H	21.30	22.45	21.73	22.84	23.26	21.61	22.77	22.04	23.15	23.58
4H	2H	19.48	20.85	19.88	21.20	21.57	19.88	21.25	20.28	21.60	21.97
	3H	21.26	22.39	21.66	22.79	23.19	21.55	22.69	21.96	23.09	23.49
	4H	21.90	22.93	22.33	23.34	23.78	22.14	23.17	22.57	23.58	24.02
	6H	22.34	23.24	22.80	23.68	24.14	22.54	23.43	22.99	23.87	24.33
	8H	22.45	23.29	22.92	23.73	24.20	22.64	23.48	23.10	23.92	24.38
	12H	22.51	23.27	23.00	23.74	24.21	22.70	23.45	23.18	23.92	24.39
8H	4H	22.18	23.02	22.64	23.46	23.93	22.40	23.24	22.86	23.68	24.15
	6H	22.72	23.42	23.22	23.91	24.38	22.88	23.58	23.38	24.07	24.54
	8H	22.88	23.51	23.39	24.01	24.50	23.03	23.65	23.54	24.16	24.64
	12H	22.99	23.54	23.49	24.03	24.59	23.13	23.68	23.64	24.17	24.73
12H	4H	22.20	22.95	22.68	23.43	23.90	22.41	23.17	22.90	23.64	24.11
	6H	22.75	23.38	23.26	23.88	24.37	22.91	23.53	23.42	24.04	24.53
	8H	22.96	23.51	23.47	24.00	24.56	23.10	23.65	23.61	24.14	24.70