

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: P1439666

Luminaire Tested: S122DR-H865D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439666
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-H865D930-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

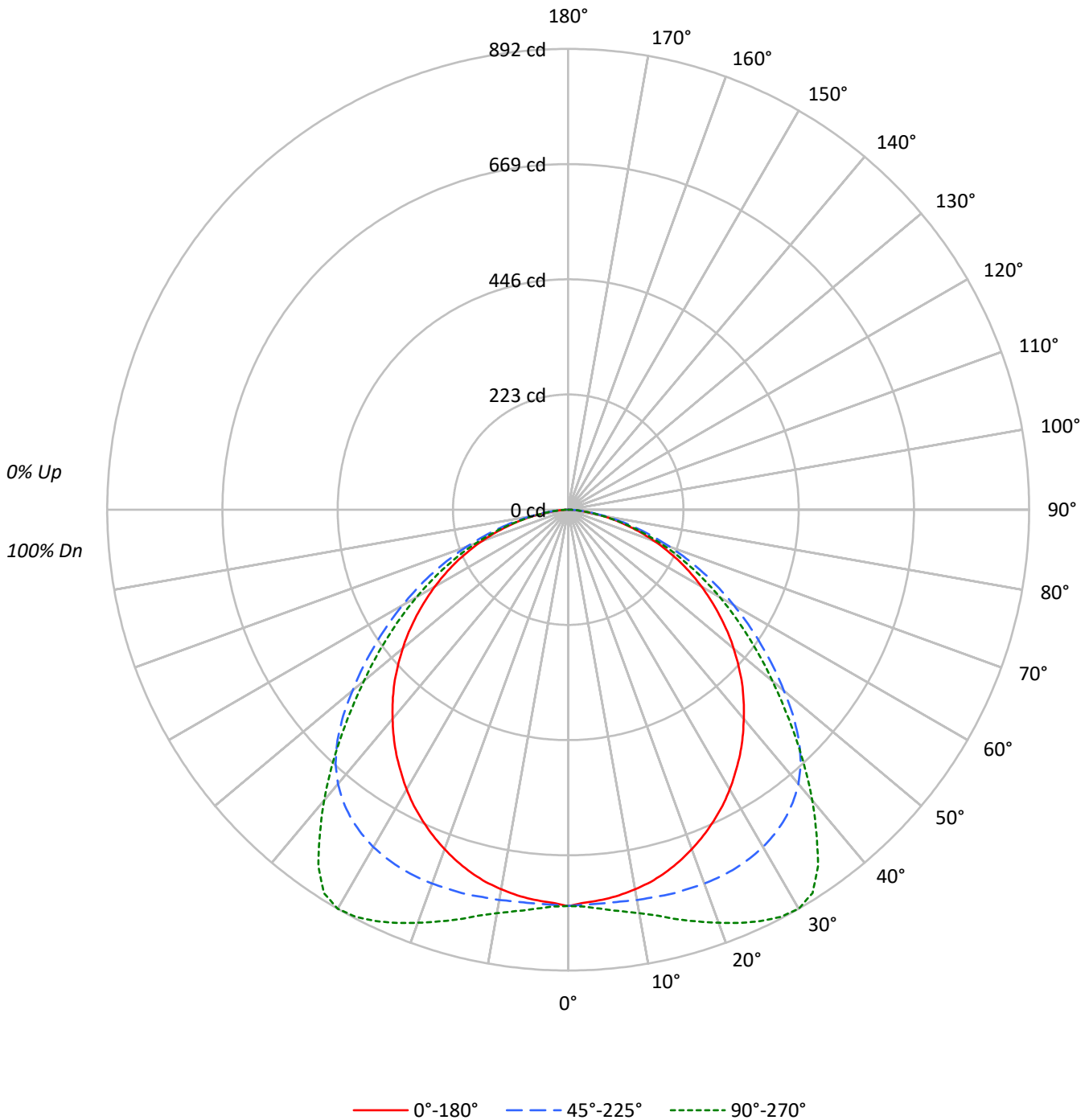
Lumens per Lamp: N/A
Luminaire Lumens: 2359.0 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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°	14531	14531	14531
5°	14416	14549	14758
10°	14352	14756	15254
15°	14261	15103	16101
20°	14097	15525	17154
25°	13908	16013	18369
30°	13682	16495	19508
35°	13403	16909	19493
40°	13073	17144	18181
45°	12748	16915	16649
50°	12317	16052	15197
55°	11828	15056	13969
60°	11299	14020	12849
65°	10687	12920	11714
70°	9832	11550	10497
75°	8689	9999	9055
80°	7179	7943	7179
85°	4761	5195	4978

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 17049 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	3.1
10°-20°	219.1	9.3
20°-30°	355.5	15.1
30°-40°	449.8	19.1
40°-50°	450.5	19.1
50°-60°	377.3	16.0
60°-70°	265.9	11.3
70°-80°	137.2	5.8
80°-90°	30.4	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°	647.9	27.5
0°-40°	1097.7	46.5
0°-60°	1925.5	81.6
0°-90°	2359.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2359.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	758	771	765	769	776	72
15°	727	748	770	801	821	205
25°	665	701	766	841	879	306
35°	580	626	731	826	843	362
45°	476	526	631	636	621	366
55°	358	402	456	437	423	320
65°	238	265	288	270	261	235
75°	119	131	137	127	124	126
85°	22	24	24	24	23	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	767.0	767.0	767.0	767.0	767.0
2.5°	761.0	773.0	765.0	766.0	769.0
5°	758.0	771.0	765.0	769.0	776.0
7.5°	753.0	767.0	765.0	773.0	783.9
10°	746.0	762.0	767.0	781.0	792.9
12.5°	738.1	755.0	768.0	789.9	804.9
15°	727.1	748.0	770.0	800.9	820.9
17.5°	714.1	739.1	770.0	812.9	835.8
20°	699.2	728.1	770.0	822.8	850.8
22.5°	683.2	715.1	769.0	831.8	865.7
25°	665.3	701.2	766.0	840.8	878.7
27.5°	646.3	685.2	761.0	847.8	888.7
30°	625.4	667.3	754.0	850.8	891.7
32.5°	602.4	648.3	744.1	844.8	879.7
35°	579.5	626.4	731.1	825.8	842.8
37.5°	554.5	603.4	714.1	788.9	788.9
40°	528.6	578.5	693.2	738.1	735.1
42.5°	502.7	552.6	666.3	688.2	678.2
45°	475.8	525.6	631.3	636.3	621.4
47.5°	446.8	495.7	590.5	583.5	566.5
50°	417.9	465.8	544.6	532.6	515.6
52.5°	389.0	434.9	500.7	483.7	468.8
55°	358.1	401.9	455.8	436.9	422.9
57.5°	328.1	369.0	412.9	392.0	380.0
60°	298.2	335.1	370.0	350.1	339.1
62.5°	268.3	300.2	329.1	309.2	299.2
65°	238.4	265.3	288.2	270.3	261.3
67.5°	207.5	231.4	247.4	231.4	225.4
70°	177.5	196.5	208.5	194.5	189.5
72.5°	147.6	163.6	171.6	160.6	155.6
75°	118.7	130.7	136.6	126.7	123.7
77.5°	90.8	99.7	102.7	95.7	91.8
80°	65.8	70.8	72.8	67.8	65.8
82.5°	40.9	44.9	46.9	42.9	41.9
85°	21.9	23.9	23.9	23.9	22.9
87.5°	8.0	10.0	10.0	10.0	9.0
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	20.78	22.40	21.15	22.71	23.02	21.30	22.91	21.66	23.22	23.54
	3H	22.35	23.81	22.73	24.13	24.49	22.76	24.22	23.14	24.54	24.90
	4H	22.89	24.26	23.29	24.60	24.98	23.26	24.62	23.66	24.97	25.35
	6H	23.23	24.50	23.64	24.86	25.25	23.56	24.82	23.97	25.19	25.58
	8H	23.32	24.52	23.74	24.91	25.31	23.63	24.84	24.06	25.23	25.63
	12H	23.35	24.51	23.78	24.89	25.32	23.67	24.82	24.09	25.20	25.63
4H	2H	21.54	22.90	21.94	23.25	23.63	21.94	23.30	22.33	23.65	24.03
	3H	23.31	24.45	23.72	24.85	25.25	23.60	24.74	24.01	25.14	25.54
	4H	23.96	24.98	24.39	25.40	25.83	24.20	25.22	24.63	25.64	26.07
	6H	24.40	25.29	24.85	25.74	26.19	24.59	25.49	25.05	25.93	26.39
	8H	24.51	25.35	24.97	25.79	26.25	24.69	25.53	25.15	25.97	26.44
	12H	24.57	25.32	25.05	25.80	26.27	24.75	25.50	25.23	25.98	26.45
8H	4H	24.24	25.08	24.70	25.52	25.98	24.45	25.29	24.91	25.73	26.20
	6H	24.78	25.47	25.27	25.96	26.44	24.94	25.63	25.43	26.12	26.60
	8H	24.94	25.56	25.45	26.07	26.55	25.08	25.70	25.59	26.21	26.70
	12H	25.04	25.59	25.55	26.08	26.64	25.18	25.73	25.69	26.22	26.79
12H	4H	24.25	25.01	24.73	25.48	25.95	24.47	25.22	24.95	25.70	26.17
	6H	24.81	25.43	25.32	25.94	26.42	24.96	25.59	25.48	26.10	26.58
	8H	25.01	25.56	25.52	26.05	26.61	25.15	25.70	25.66	26.19	26.76