

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: P1439663

Luminaire Tested: S122DR-H865D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439663
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-H865D840-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

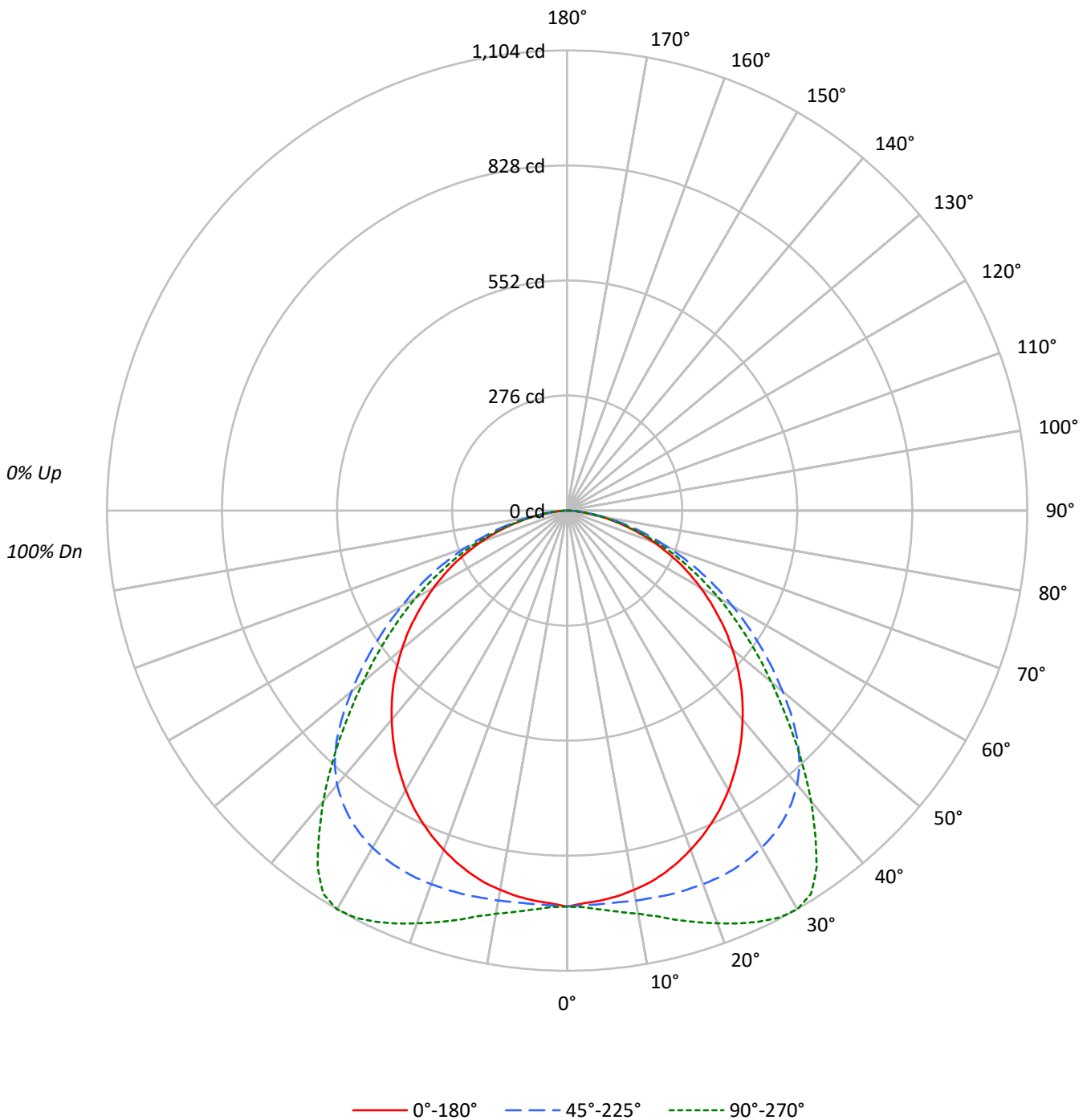
Lumens per Lamp: N/A
Luminaire Lumens: 2921.9 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (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	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°	17999	17999	17999
5°	17856	18022	18278
10°	17778	18276	18896
15°	17665	18706	19942
20°	17460	19228	21246
25°	17225	19834	22752
30°	16946	20433	24163
35°	16602	20945	24144
40°	16195	21235	22519
45°	15789	20953	20623
50°	15256	19881	18825
55°	14649	18649	17302
60°	13997	17366	15915
65°	13238	16004	14511
70°	12181	14303	13001
75°	10761	12393	11214
80°	8892	9841	8892
85°	5913	6434	6174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 21119 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	3.1
10°-20°	271.4	9.3
20°-30°	440.3	15.1
30°-40°	557.1	19.1
40°-50°	558.0	19.1
50°-60°	467.3	16.0
60°-70°	329.3	11.3
70°-80°	169.9	5.8
80°-90°	37.7	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°	802.5	27.5
0°-40°	1359.7	46.5
0°-60°	2385.0	81.6
0°-90°	2921.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2921.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	939	955	948	952	961	89
15°	901	927	954	992	1017	254
25°	824	868	949	1042	1088	380
35°	718	776	906	1023	1044	449
45°	589	651	782	788	770	454
55°	444	498	565	541	524	397
65°	295	329	357	335	324	292
75°	147	162	169	157	153	156
85°	27	30	30	30	28	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	950.0	950.0	950.0	950.0	950.0
2.5°	942.6	957.4	947.6	948.8	952.5
5°	938.9	955.0	947.6	952.5	961.1
7.5°	932.7	950.0	947.6	957.4	971.0
10°	924.1	943.9	950.0	967.3	982.2
12.5°	914.2	935.2	951.3	978.4	997.0
15°	900.6	926.6	953.7	992.0	1016.7
17.5°	884.6	915.4	953.7	1006.9	1035.3
20°	866.0	901.8	953.7	1019.2	1053.8
22.5°	846.3	885.8	952.5	1030.3	1072.3
25°	824.0	868.5	948.8	1041.5	1088.4
27.5°	800.5	848.7	942.6	1050.1	1100.8
30°	774.6	826.5	934.0	1053.8	1104.5
32.5°	746.2	803.0	921.6	1046.4	1089.6
35°	717.8	775.8	905.6	1022.9	1043.9
37.5°	686.9	747.4	884.6	977.2	977.2
40°	654.8	716.5	858.6	914.2	910.5
42.5°	622.6	684.4	825.3	852.4	840.1
45°	589.3	651.1	782.0	788.2	769.7
47.5°	553.5	614.0	731.4	722.7	701.7
50°	517.6	576.9	674.5	659.7	638.7
52.5°	481.8	538.6	620.2	599.2	580.6
55°	443.5	497.9	564.6	541.1	523.8
57.5°	406.4	457.1	511.5	485.5	470.7
60°	369.4	415.1	458.3	433.6	420.0
62.5°	332.3	371.9	407.7	383.0	370.6
65°	295.3	328.6	357.0	334.8	323.7
67.5°	257.0	286.6	306.4	286.6	279.2
70°	219.9	243.4	258.2	240.9	234.7
72.5°	182.8	202.6	212.5	198.9	192.7
75°	147.0	161.8	169.3	156.9	153.2
77.5°	112.4	123.5	127.2	118.6	113.7
80°	81.5	87.7	90.2	84.0	81.5
82.5°	50.7	55.6	58.1	53.1	51.9
85°	27.2	29.6	29.6	29.6	28.4
87.5°	9.9	12.4	12.4	12.4	11.1
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	21.53	23.14	21.89	23.45	23.77	22.04	23.65	22.40	23.97	24.28
	3H	23.10	24.55	23.47	24.88	25.24	23.51	24.96	23.88	25.29	25.65
	4H	23.63	25.00	24.03	25.35	25.72	24.00	25.37	24.40	25.71	26.09
	6H	23.98	25.24	24.39	25.61	26.00	24.30	25.57	24.71	25.93	26.32
	8H	24.06	25.27	24.48	25.66	26.05	24.37	25.58	24.80	25.97	26.37
	12H	24.10	25.25	24.53	25.63	26.06	24.41	25.56	24.84	25.95	26.37
4H	2H	22.28	23.65	22.68	24.00	24.37	22.68	24.04	23.08	24.39	24.77
	3H	24.05	25.19	24.46	25.59	25.99	24.35	25.49	24.76	25.88	26.28
	4H	24.70	25.73	25.13	26.14	26.58	24.94	25.97	25.37	26.38	26.82
	6H	25.14	26.04	25.60	26.48	26.94	25.34	26.23	25.79	26.67	27.13
	8H	25.25	26.09	25.71	26.53	27.00	25.44	26.27	25.90	26.72	27.18
	12H	25.31	26.06	25.79	26.54	27.01	25.50	26.25	25.98	26.72	27.19
8H	4H	24.98	25.82	25.44	26.26	26.73	25.20	26.03	25.66	26.48	26.94
	6H	25.52	26.21	26.01	26.70	27.18	25.68	26.38	26.18	26.86	27.34
	8H	25.68	26.30	26.19	26.81	27.30	25.83	26.45	26.34	26.95	27.44
	12H	25.78	26.33	26.29	26.83	27.39	25.93	26.48	26.43	26.97	27.53
12H	4H	25.00	25.75	25.48	26.22	26.69	25.21	25.96	25.69	26.44	26.91
	6H	25.55	26.17	26.06	26.68	27.17	25.71	26.33	26.22	26.84	27.33
	8H	25.75	26.31	26.26	26.80	27.36	25.90	26.45	26.40	26.94	27.50