

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: P1439708

Luminaire Tested: S122DR-S865D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439708
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-S865D840-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

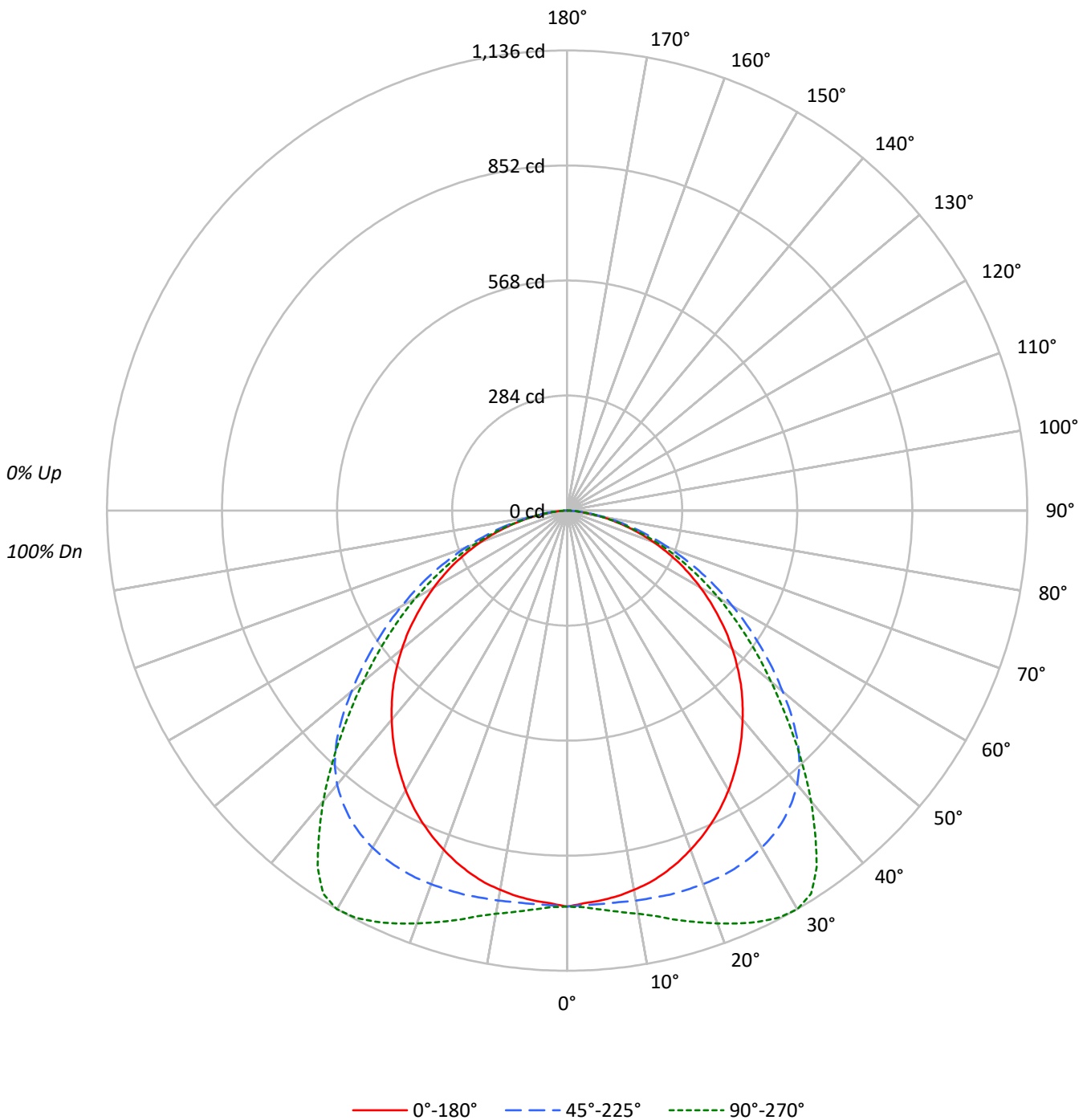
Lumens per Lamp: N/A
Luminaire Lumens: 3006.6 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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°	18521	18521	18521
5°	18374	18543	18809
10°	18294	18807	19442
15°	18176	19249	20520
20°	17966	19787	21863
25°	17725	20409	23413
30°	17438	21026	24863
35°	17083	21551	24845
40°	16664	21851	23171
45°	16248	21561	21220
50°	15698	20458	19371
55°	15075	19191	17804
60°	14403	17870	16377
65°	13619	16470	14933
70°	12536	14718	13378
75°	11075	12752	11537
80°	9154	10125	9154
85°	6087	6630	6347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 21732 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	3.1
10°-20°	279.2	9.3
20°-30°	453.1	15.1
30°-40°	573.3	19.1
40°-50°	574.2	19.1
50°-60°	480.9	16.0
60°-70°	338.9	11.3
70°-80°	174.8	5.8
80°-90°	38.8	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°	825.8	27.5
0°-40°	1399.1	46.5
0°-60°	2454.2	81.6
0°-90°	3006.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3006.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	966	983	975	980	989	92
15°	927	953	981	1021	1046	261
25°	848	894	976	1072	1120	391
35°	739	798	932	1053	1074	462
45°	606	670	805	811	792	467
55°	456	512	581	557	539	408
65°	304	338	367	344	333	300
75°	151	166	174	161	158	161
85°	28	30	30	30	29	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	977.6	977.6	977.6	977.6	977.6
2.5°	970.0	985.2	975.0	976.3	980.1
5°	966.1	982.7	975.0	980.1	989.0
7.5°	959.8	977.6	975.0	985.2	999.2
10°	950.9	971.2	977.6	995.4	1010.6
12.5°	940.7	962.3	978.9	1006.8	1025.9
15°	926.7	953.4	981.4	1020.8	1046.2
17.5°	910.2	942.0	981.4	1036.1	1065.3
20°	891.1	928.0	981.4	1048.8	1084.4
22.5°	870.8	911.5	980.1	1060.2	1103.4
25°	847.9	893.7	976.3	1071.7	1120.0
27.5°	823.8	873.3	970.0	1080.6	1132.7
30°	797.1	850.5	961.1	1084.4	1136.5
32.5°	767.8	826.3	948.3	1076.7	1121.2
35°	738.6	798.3	931.8	1052.6	1074.2
37.5°	706.8	769.1	910.2	1005.6	1005.6
40°	673.8	737.3	883.5	940.7	936.9
42.5°	640.7	704.3	849.2	877.2	864.4
45°	606.4	669.9	804.7	811.1	792.0
47.5°	569.5	631.8	752.6	743.7	722.1
50°	532.6	593.7	694.1	678.8	657.2
52.5°	495.8	554.3	638.2	616.6	597.5
55°	456.4	512.3	581.0	556.8	539.0
57.5°	418.2	470.4	526.3	499.6	484.3
60°	380.1	427.1	471.6	446.2	432.2
62.5°	342.0	382.6	419.5	394.1	381.4
65°	303.8	338.1	367.4	344.5	333.1
67.5°	264.4	294.9	315.3	294.9	287.3
70°	226.3	250.4	265.7	247.9	241.5
72.5°	188.1	208.5	218.7	204.7	198.3
75°	151.3	166.5	174.2	161.4	157.6
77.5°	115.7	127.1	130.9	122.0	117.0
80°	83.9	90.3	92.8	86.4	83.9
82.5°	52.1	57.2	59.7	54.7	53.4
85°	28.0	30.5	30.5	30.5	29.2
87.5°	10.2	12.7	12.7	12.7	11.4
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	21.63	23.24	21.99	23.55	23.87	22.14	23.75	22.50	24.07	24.38
	3H	23.20	24.65	23.57	24.98	25.34	23.61	25.06	23.98	25.39	25.75
	4H	23.73	25.10	24.13	25.45	25.82	24.10	25.47	24.50	25.81	26.19
	6H	24.08	25.34	24.49	25.71	26.10	24.40	25.67	24.81	26.03	26.42
	8H	24.16	25.37	24.58	25.75	26.15	24.47	25.68	24.90	26.07	26.47
	12H	24.20	25.35	24.63	25.73	26.16	24.51	25.66	24.94	26.05	26.47
4H	2H	22.38	23.75	22.78	24.09	24.47	22.78	24.14	23.18	24.49	24.87
	3H	24.15	25.29	24.56	25.69	26.09	24.45	25.58	24.86	25.98	26.38
	4H	24.80	25.83	25.23	26.24	26.68	25.04	26.07	25.47	26.48	26.92
	6H	25.24	26.14	25.70	26.58	27.04	25.44	26.33	25.89	26.77	27.23
	8H	25.35	26.19	25.81	26.63	27.10	25.54	26.37	26.00	26.82	27.28
	12H	25.41	26.16	25.89	26.64	27.11	25.59	26.35	26.08	26.82	27.29
8H	4H	25.08	25.92	25.54	26.36	26.83	25.30	26.13	25.76	26.58	27.04
	6H	25.62	26.31	26.11	26.80	27.28	25.78	26.47	26.27	26.96	27.44
	8H	25.78	26.40	26.29	26.91	27.40	25.92	26.55	26.43	27.05	27.54
	12H	25.88	26.43	26.39	26.93	27.49	26.03	26.58	26.53	27.07	27.63
12H	4H	25.10	25.85	25.58	26.32	26.79	25.31	26.06	25.79	26.54	27.01
	6H	25.65	26.27	26.16	26.78	27.27	25.81	26.43	26.32	26.94	27.42
	8H	25.85	26.41	26.36	26.90	27.46	26.00	26.55	26.50	27.04	27.60