

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: P1439668

Luminaire Tested: S122DR-H865D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439668
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-H865D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

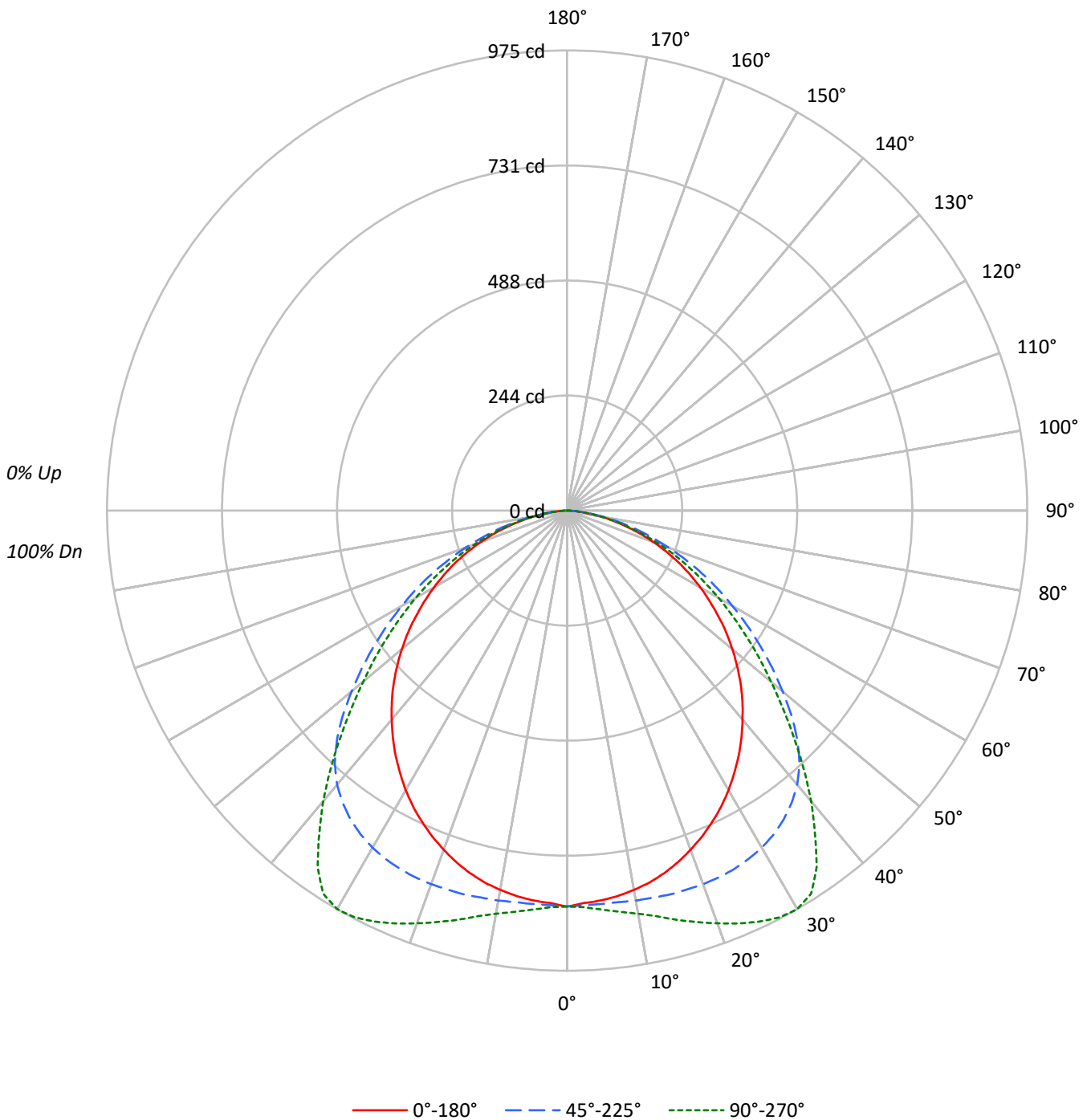
Lumens per Lamp: N/A
Luminaire Lumens: 2580.0 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	15894	15894	15894
5°	15768	15913	16141
10°	15698	16139	16683
15°	15597	16517	17610
20°	15418	16978	18761
25°	15210	17514	20091
30°	14964	18042	21334
35°	14659	18494	21320
40°	14300	18752	19885
45°	13941	18501	18209
50°	13473	17555	16624
55°	12935	16466	15277
60°	12360	15335	14054
65°	11687	14135	12812
70°	10758	12630	11483
75°	9502	10936	9904
80°	7856	8685	7856
85°	5217	5695	5456

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 18648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	3.1
10°-20°	239.6	9.3
20°-30°	388.8	15.1
30°-40°	492.0	19.1
40°-50°	492.7	19.1
50°-60°	412.6	16.0
60°-70°	290.8	11.3
70°-80°	150.0	5.8
80°-90°	33.3	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°	708.6	27.5
0°-40°	1200.6	46.5
0°-60°	2105.9	81.6
0°-90°	2580.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2580.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	839	839	839	839	839	
5°	829	843	837	841	849	79
15°	795	818	842	876	898	224
25°	728	767	838	920	961	335
35°	634	685	800	903	922	396
45°	520	575	690	696	680	401
55°	392	440	498	478	462	350
65°	261	290	315	296	286	258
75°	130	143	149	138	135	138
85°	24	26	26	26	25	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	838.9	838.9	838.9	838.9	838.9
2.5°	832.3	845.4	836.7	837.8	841.1
5°	829.1	843.2	836.7	841.1	848.7
7.5°	823.6	838.9	836.7	845.4	857.4
10°	816.0	833.4	838.9	854.1	867.2
12.5°	807.2	825.8	840.0	864.0	880.3
15°	795.2	818.1	842.1	876.0	897.8
17.5°	781.1	808.3	842.1	889.1	914.1
20°	764.7	796.3	842.1	900.0	930.5
22.5°	747.2	782.2	841.1	909.8	946.9
25°	727.6	766.9	837.8	919.6	961.1
27.5°	706.9	749.4	832.3	927.2	972.0
30°	684.0	729.8	824.7	930.5	975.2
32.5°	658.9	709.1	813.8	924.0	962.1
35°	633.8	685.1	799.6	903.2	921.8
37.5°	606.5	660.0	781.1	862.9	862.9
40°	578.2	632.7	758.2	807.2	804.0
42.5°	549.8	604.3	728.7	752.7	741.8
45°	520.3	574.9	690.5	696.0	679.6
47.5°	488.7	542.2	645.8	638.2	619.6
50°	457.1	509.4	595.6	582.5	564.0
52.5°	425.4	475.6	547.6	529.1	512.7
55°	391.6	439.6	498.5	477.8	462.5
57.5°	358.9	403.6	451.6	428.7	415.6
60°	326.2	366.5	404.7	382.9	370.9
62.5°	293.4	328.4	360.0	338.2	327.3
65°	260.7	290.2	315.3	295.6	285.8
67.5°	226.9	253.1	270.5	253.1	246.5
70°	194.2	214.9	228.0	212.7	207.3
72.5°	161.4	178.9	187.6	175.6	170.2
75°	129.8	142.9	149.4	138.5	135.3
77.5°	99.3	109.1	112.4	104.7	100.4
80°	72.0	77.5	79.6	74.2	72.0
82.5°	44.7	49.1	51.3	46.9	45.8
85°	24.0	26.2	26.2	26.2	25.1
87.5°	8.7	10.9	10.9	10.9	9.8
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	21.09	22.71	21.46	23.02	23.33	21.61	23.22	21.97	23.53	23.85
	3H	22.67	24.12	23.04	24.45	24.81	23.08	24.53	23.45	24.86	25.22
	4H	23.20	24.57	23.60	24.92	25.29	23.57	24.93	23.97	25.28	25.66
	6H	23.54	24.81	23.96	25.17	25.57	23.87	25.13	24.28	25.50	25.89
	8H	23.63	24.83	24.05	25.22	25.62	23.94	25.15	24.37	25.54	25.94
	12H	23.66	24.82	24.09	25.20	25.63	23.98	25.13	24.41	25.51	25.94
4H	2H	21.85	23.22	22.25	23.56	23.94	22.25	23.61	22.65	23.96	24.34
	3H	23.62	24.76	24.03	25.16	25.56	23.91	25.05	24.32	25.45	25.85
	4H	24.27	25.30	24.70	25.71	26.15	24.51	25.53	24.94	25.95	26.38
	6H	24.71	25.61	25.17	26.05	26.50	24.90	25.80	25.36	26.24	26.70
	8H	24.82	25.66	25.28	26.10	26.57	25.00	25.84	25.46	26.28	26.75
	12H	24.88	25.63	25.36	26.11	26.58	25.06	25.81	25.54	26.29	26.76
8H	4H	24.55	25.39	25.01	25.83	26.30	24.76	25.60	25.23	26.05	26.51
	6H	25.09	25.78	25.58	26.27	26.75	25.25	25.94	25.74	26.43	26.91
	8H	25.25	25.87	25.76	26.38	26.86	25.39	26.02	25.90	26.52	27.01
	12H	25.35	25.90	25.86	26.39	26.96	25.49	26.04	26.00	26.54	27.10
12H	4H	24.57	25.32	25.05	25.79	26.26	24.78	25.53	25.26	26.01	26.48
	6H	25.12	25.74	25.63	26.25	26.74	25.28	25.90	25.79	26.41	26.89
	8H	25.32	25.87	25.83	26.36	26.93	25.46	26.02	25.97	26.51	27.07