

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: P1439659

Luminaire Tested: S122DR-H675D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439659  
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-H675D940-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**

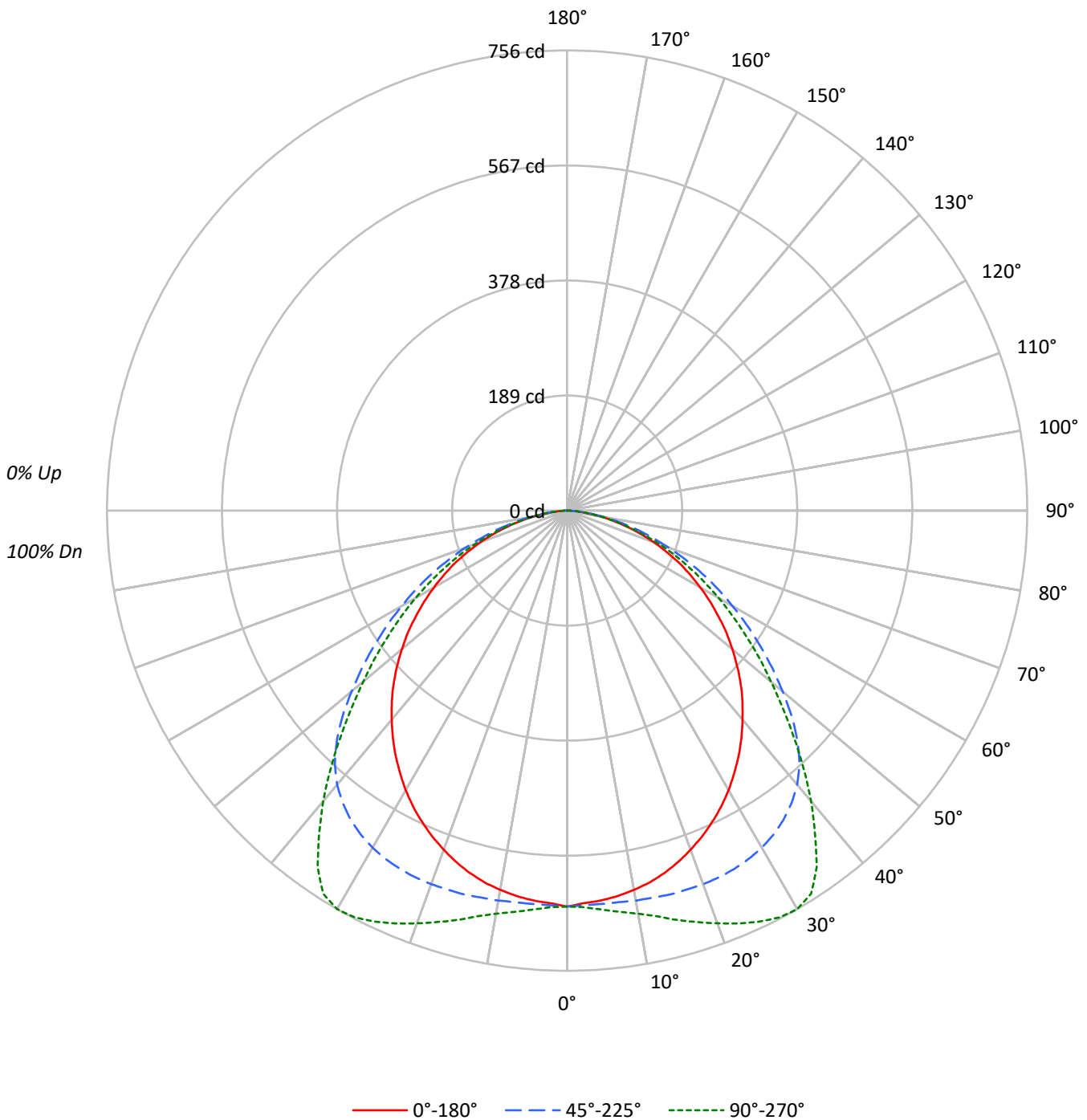
Lumens per Lamp: N/A  
Luminaire Lumens: 2000.6 lumens  
Efficiency: N/A  
Efficacy: 84.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	12324	12324	12324
5°	12227	12339	12516
10°	12172	12514	12938
15°	12094	12808	13655
20°	11956	13166	14547
25°	11794	13580	15578
30°	11603	13990	16543
35°	11368	14340	16532
40°	11087	14540	15418
45°	10811	14345	14120
50°	10446	13611	12889
55°	10032	12770	11845
60°	9583	11890	10898
65°	9065	10961	9934
70°	8342	9794	8902
75°	7371	8484	7679
80°	6088	6732	6088
85°	4043	4413	4239

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 14460 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.2	3.1
10°-20°	185.8	9.3
20°-30°	301.5	15.1
30°-40°	381.5	19.1
40°-50°	382.0	19.1
50°-60°	320.0	16.0
60°-70°	225.5	11.3
70°-80°	116.3	5.8
80°-90°	25.8	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°	549.5	27.5
0°-40°	931.0	46.5
0°-60°	1633.0	81.6
0°-90°	2000.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2000.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	650	650	650	650	650	
5°	643	654	649	652	658	61
15°	617	634	653	679	696	174
25°	564	595	650	713	745	260
35°	492	531	620	700	715	307
45°	404	446	535	540	527	311
55°	304	341	387	370	359	272
65°	202	225	244	229	222	200
75°	101	111	116	107	105	107
85°	19	20	20	20	20	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	650.5	650.5	650.5	650.5	650.5
2.5°	645.4	655.6	648.8	649.6	652.2
5°	642.9	653.9	648.8	652.2	658.1
7.5°	638.6	650.5	648.8	655.6	664.9
10°	632.7	646.2	650.5	662.3	672.5
12.5°	625.9	640.3	651.3	669.9	682.6
15°	616.6	634.4	653.0	679.2	696.2
17.5°	605.6	626.8	653.0	689.4	708.8
20°	593.0	617.5	653.0	697.8	721.5
22.5°	579.4	606.5	652.2	705.5	734.2
25°	564.2	594.6	649.6	713.1	745.2
27.5°	548.1	581.1	645.4	719.0	753.7
30°	530.4	565.9	639.5	721.5	756.2
32.5°	510.9	549.8	631.0	716.5	746.1
35°	491.5	531.2	620.0	700.4	714.8
37.5°	470.3	511.8	605.6	669.1	669.1
40°	448.3	490.6	587.9	625.9	623.4
42.5°	426.3	468.6	565.0	583.7	575.2
45°	403.5	445.8	535.4	539.7	527.0
47.5°	379.0	420.4	500.8	494.8	480.5
50°	354.4	395.0	461.8	451.7	437.3
52.5°	329.9	368.8	424.6	410.2	397.6
55°	303.7	340.9	386.6	370.5	358.6
57.5°	278.3	313.0	350.2	332.4	322.3
60°	252.9	284.2	313.8	296.9	287.6
62.5°	227.5	254.6	279.1	262.2	253.8
65°	202.2	225.0	244.5	229.2	221.6
67.5°	175.9	196.2	209.8	196.2	191.2
70°	150.6	166.6	176.8	164.9	160.7
72.5°	125.2	138.7	145.5	136.2	132.0
75°	100.7	110.8	115.9	107.4	104.9
77.5°	77.0	84.6	87.1	81.2	77.8
80°	55.8	60.1	61.7	57.5	55.8
82.5°	34.7	38.1	39.8	36.4	35.5
85°	18.6	20.3	20.3	20.3	19.5
87.5°	6.8	8.5	8.5	8.5	7.6
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	20.21	21.82	20.58	22.14	22.45	20.72	22.34	21.09	22.65	22.96
	3H	21.78	23.23	22.16	23.56	23.92	22.19	23.64	22.57	23.97	24.33
	4H	22.32	23.68	22.72	24.03	24.41	22.68	24.05	23.08	24.40	24.77
	6H	22.66	23.93	23.07	24.29	24.68	22.98	24.25	23.40	24.61	25.01
	8H	22.74	23.95	23.17	24.34	24.74	23.06	24.26	23.48	24.65	25.05
	12H	22.78	23.94	23.21	24.32	24.75	23.09	24.25	23.52	24.63	25.06
4H	2H	20.97	22.33	21.36	22.68	23.06	21.36	22.73	21.76	23.08	23.45
	3H	22.74	23.88	23.15	24.27	24.67	23.03	24.17	23.44	24.57	24.97
	4H	23.38	24.41	23.82	24.83	25.26	23.62	24.65	24.05	25.06	25.50
	6H	23.83	24.72	24.28	25.16	25.62	24.02	24.92	24.47	25.36	25.81
	8H	23.94	24.77	24.40	25.22	25.68	24.12	24.96	24.58	25.40	25.87
	12H	24.00	24.75	24.48	25.22	25.69	24.18	24.93	24.66	25.41	25.88
8H	4H	23.67	24.50	24.13	24.95	25.41	23.88	24.72	24.34	25.16	25.63
	6H	24.20	24.90	24.70	25.39	25.86	24.36	25.06	24.86	25.55	26.02
	8H	24.36	24.99	24.88	25.49	25.98	24.51	25.13	25.02	25.64	26.13
	12H	24.47	25.02	24.98	25.51	26.07	24.61	25.16	25.12	25.65	26.21
12H	4H	23.68	24.43	24.16	24.91	25.38	23.90	24.65	24.38	25.12	25.59
	6H	24.23	24.86	24.74	25.37	25.85	24.39	25.02	24.90	25.52	26.01
	8H	24.44	24.99	24.95	25.48	26.04	24.58	25.13	25.09	25.62	26.18