

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: P1439627

Luminaire Tested: S122DR-H1005D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439627  
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-H1005D840-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

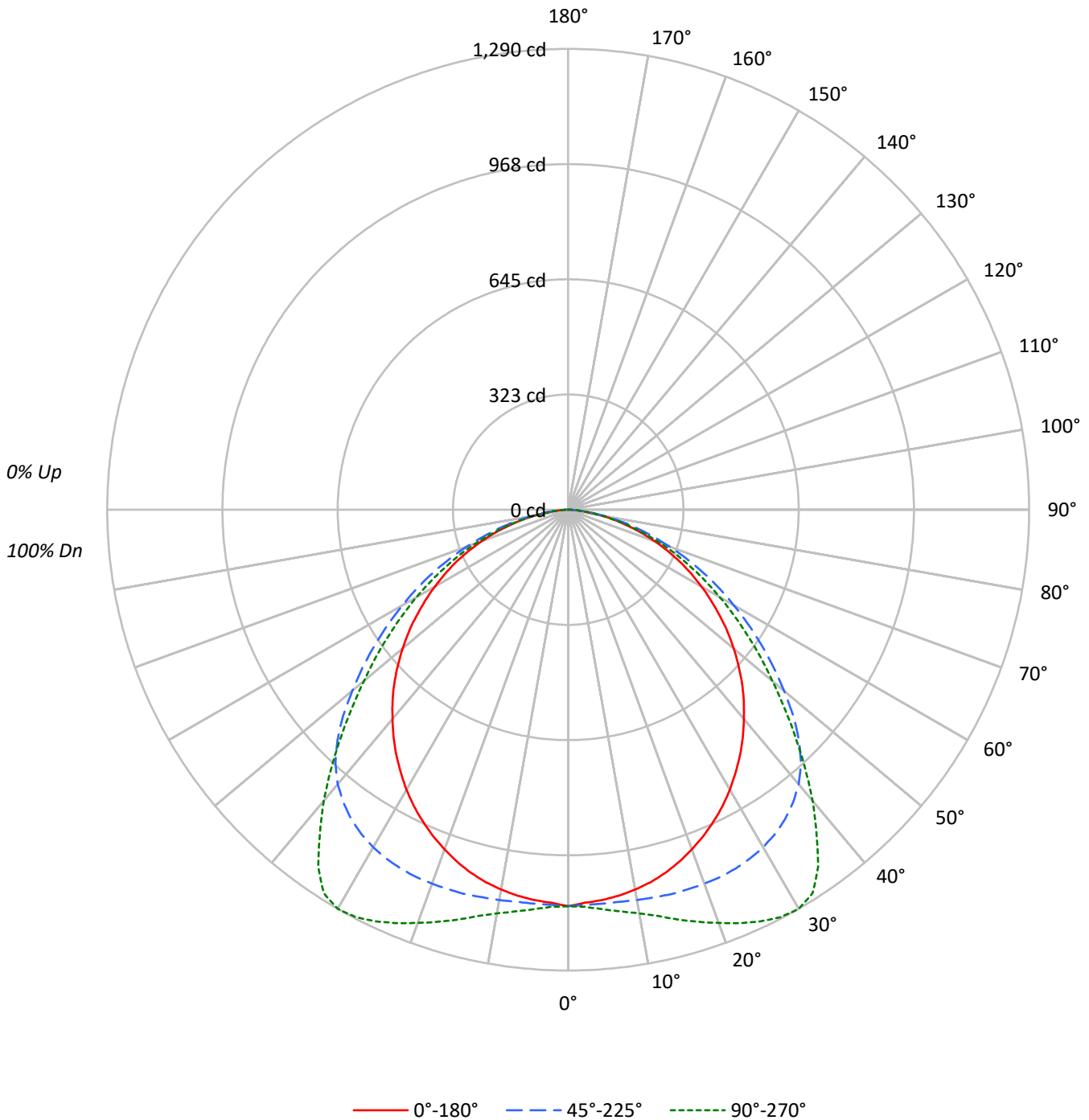
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3413.3 lumens  
Efficiency: N/A  
Efficacy: 93.3 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): 36.6  
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°	21026	21026	21026
5°	20859	21051	21354
10°	20768	21350	22072
15°	20636	21852	23296
20°	20398	22462	24819
25°	20123	23170	26578
30°	19796	23868	28225
35°	19393	24468	28205
40°	18918	24806	26305
45°	18445	24476	24090
50°	17823	23226	21991
55°	17113	21784	20212
60°	16350	20287	18593
65°	15462	18698	16950
70°	14231	16707	15189
75°	12569	14472	13103
80°	10398	11500	10398
85°	6913	7521	7217

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 24671 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.1	3.1
10°-20°	317.0	9.3
20°-30°	514.4	15.1
30°-40°	650.9	19.1
40°-50°	651.8	19.1
50°-60°	545.9	16.0
60°-70°	384.7	11.3
70°-80°	198.5	5.8
80°-90°	44.0	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°	937.5	27.5
0°-40°	1588.4	46.5
0°-60°	2786.1	81.6
0°-90°	3413.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3413.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1110	1110	1110	1110	1110	
5°	1097	1116	1107	1113	1123	104
15°	1052	1082	1114	1159	1188	297
25°	963	1015	1108	1217	1271	443
35°	838	906	1058	1195	1220	524
45°	688	761	914	921	899	530
55°	518	582	660	632	612	464
65°	345	384	417	391	378	341
75°	172	189	198	183	179	183
85°	32	35	35	35	33	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1109.8	1109.8	1109.8	1109.8	1109.8
2.5°	1101.2	1118.5	1106.9	1108.4	1112.7
5°	1096.8	1115.6	1106.9	1112.7	1122.8
7.5°	1089.6	1109.8	1106.9	1118.5	1134.3
10°	1079.5	1102.6	1109.8	1130.0	1147.3
12.5°	1068.0	1092.5	1111.3	1143.0	1164.7
15°	1052.1	1082.4	1114.1	1158.9	1187.7
17.5°	1033.3	1069.4	1114.1	1176.2	1209.4
20°	1011.7	1053.5	1114.1	1190.6	1231.0
22.5°	988.6	1034.8	1112.7	1203.6	1252.7
25°	962.6	1014.6	1108.4	1216.6	1271.4
27.5°	935.2	991.5	1101.2	1226.7	1285.9
30°	904.9	965.5	1091.0	1231.0	1290.2
32.5°	871.7	938.1	1076.6	1222.4	1272.9
35°	838.5	906.3	1057.9	1195.0	1219.5
37.5°	802.4	873.1	1033.3	1141.6	1141.6
40°	764.9	837.0	1003.0	1068.0	1063.6
42.5°	727.4	799.5	964.0	995.8	981.4
45°	688.4	760.6	913.5	920.8	899.1
47.5°	646.5	717.3	854.4	844.3	819.7
50°	604.7	674.0	788.0	770.7	746.1
52.5°	562.8	629.2	724.5	699.9	678.3
55°	518.1	581.6	659.5	632.1	611.9
57.5°	474.8	534.0	597.5	567.2	549.9
60°	431.5	484.9	535.4	506.6	490.7
62.5°	388.2	434.4	476.3	447.4	433.0
65°	344.9	383.9	417.1	391.1	378.1
67.5°	300.2	334.8	357.9	334.8	326.2
70°	256.9	284.3	301.6	281.4	274.2
72.5°	213.6	236.7	248.2	232.4	225.1
75°	171.7	189.1	197.7	183.3	179.0
77.5°	131.3	144.3	148.6	138.5	132.8
80°	95.3	102.5	105.4	98.1	95.3
82.5°	59.2	64.9	67.8	62.1	60.6
85°	31.8	34.6	34.6	34.6	33.2
87.5°	11.5	14.4	14.4	14.4	13.0
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	22.07	23.68	22.43	23.99	24.31	22.58	24.19	22.95	24.51	24.82
	3H	23.64	25.09	24.01	25.42	25.78	24.05	25.50	24.43	25.83	26.19
	4H	24.17	25.54	24.57	25.89	26.26	24.54	25.91	24.94	26.26	26.63
	6H	24.52	25.78	24.93	26.15	26.54	24.84	26.11	25.25	26.47	26.86
	8H	24.60	25.81	25.02	26.20	26.59	24.91	26.12	25.34	26.51	26.91
	12H	24.64	25.79	25.07	26.17	26.60	24.95	26.10	25.38	26.49	26.92
4H	2H	22.82	24.19	23.22	24.54	24.91	23.22	24.59	23.62	24.93	25.31
	3H	24.59	25.73	25.00	26.13	26.53	24.89	26.03	25.30	26.42	26.82
	4H	25.24	26.27	25.67	26.68	27.12	25.48	26.51	25.91	26.92	27.36
	6H	25.68	26.58	26.14	27.02	27.48	25.88	26.77	26.33	27.21	27.67
	8H	25.79	26.63	26.25	27.07	27.54	25.98	26.81	26.44	27.26	27.72
	12H	25.85	26.60	26.33	27.08	27.55	26.04	26.79	26.52	27.26	27.73
8H	4H	25.52	26.36	25.98	26.80	27.27	25.74	26.58	26.20	27.02	27.48
	6H	26.06	26.76	26.56	27.24	27.72	26.22	26.92	26.72	27.40	27.88
	8H	26.22	26.84	26.73	27.35	27.84	26.37	26.99	26.88	27.50	27.98
	12H	26.32	26.88	26.83	27.37	27.93	26.47	27.02	26.97	27.51	28.07
12H	4H	25.54	26.29	26.02	26.77	27.23	25.75	26.50	26.23	26.98	27.45
	6H	26.09	26.71	26.60	27.22	27.71	26.25	26.87	26.76	27.38	27.87
	8H	26.30	26.85	26.80	27.34	27.90	26.44	26.99	26.94	27.48	28.04