

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: P1055274

Luminaire Tested: S122R3DR-S865D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055274  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S865D940-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

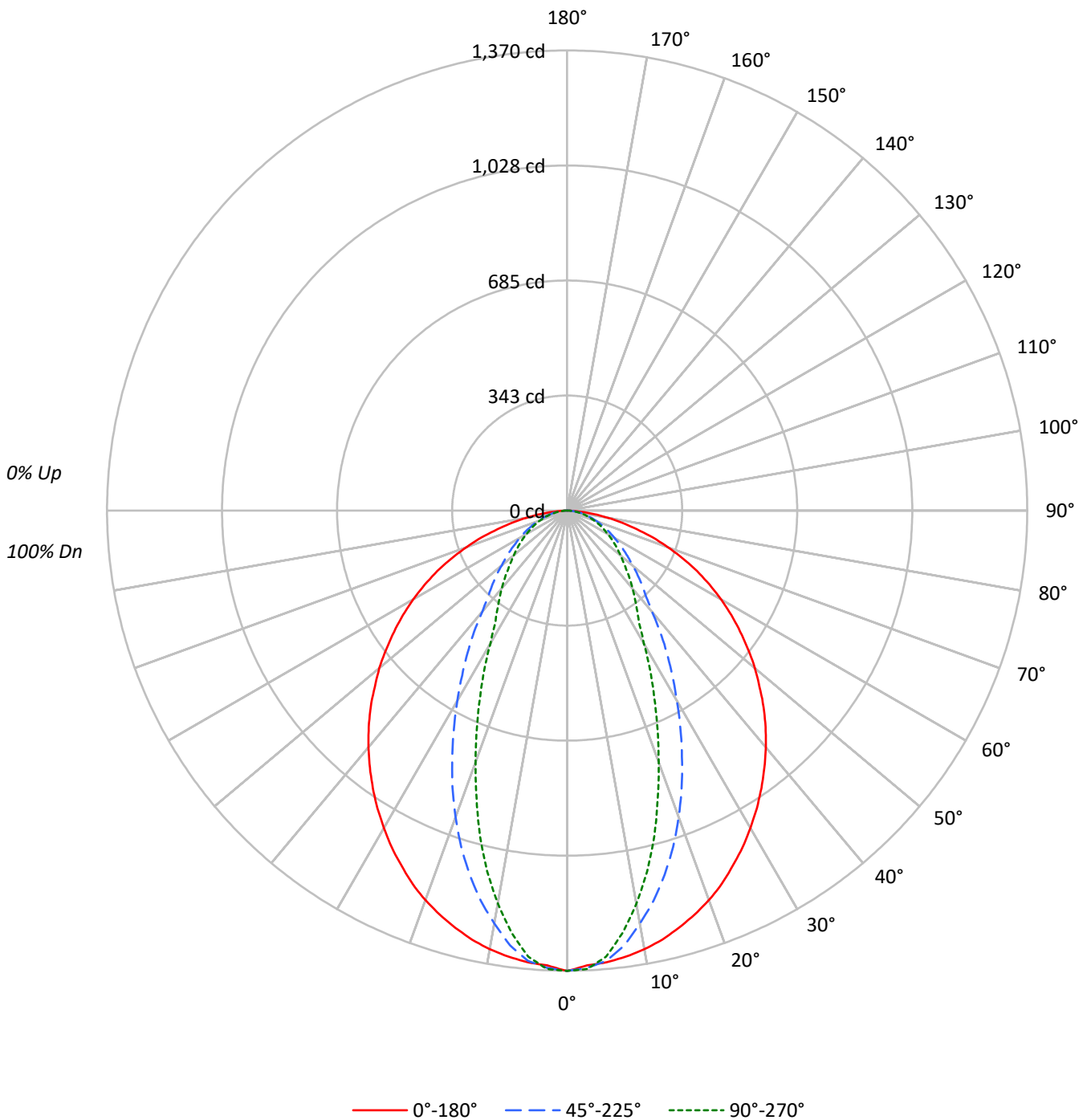
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2073.0 lumens  
Efficiency: N/A  
Efficacy: 59.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
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 (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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	25965	25965	25965
5°	25673	25585	25346
10°	25506	24007	22861
15°	25218	22003	19667
20°	24882	19569	16057
25°	24385	16912	12817
30°	23865	14290	10002
35°	23323	11953	8403
40°	22758	9692	7481
45°	22166	8475	6693
50°	21513	7498	6113
55°	20780	6775	5678
60°	20060	6165	5297
65°	19111	5649	4985
70°	17709	5268	4697
75°	15687	4780	4443
80°	13376	4506	4124
85°	9217	3978	3739

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 22166 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.6	6.1
10°-20°	317.1	15.3
20°-30°	390.7	18.8
30°-40°	374.9	18.1
40°-50°	323.3	15.6
50°-60°	250.8	12.1
60°-70°	171.7	8.3
70°-80°	93.3	4.5
80°-90°	25.6	1.2
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°	833.4	40.2
0°-40°	1208.2	58.3
0°-60°	1782.4	86.0
0°-90°	2073.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2073.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1370	1370	1370	1370	1370	
5°	1350	1369	1345	1328	1333	128
15°	1286	1247	1122	1030	1003	363
25°	1166	1042	809	660	613	538
35°	1008	800	517	385	363	631
45°	827	557	316	261	250	638
55°	629	335	205	178	172	563
65°	426	182	126	115	111	421
75°	214	84	65	62	61	230
85°	42	21	18	18	17	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1370.5	1370.5	1370.5	1370.5	1370.5
2.5°	1355.6	1378.5	1362.5	1362.5	1365.9
5°	1349.9	1369.4	1345.3	1328.1	1332.7
7.5°	1339.6	1353.3	1305.2	1268.5	1267.4
10°	1325.8	1327.0	1247.9	1199.8	1188.3
12.5°	1308.6	1290.3	1189.5	1117.3	1100.1
15°	1285.7	1246.7	1121.8	1030.2	1002.7
17.5°	1261.6	1202.1	1049.6	935.1	897.2
20°	1234.1	1148.2	970.6	839.9	796.4
22.5°	1203.2	1096.6	891.5	748.3	702.4
25°	1166.5	1041.6	809.0	660.0	613.1
27.5°	1131.0	985.5	729.9	582.1	534.0
30°	1090.9	924.7	653.2	507.6	457.2
32.5°	1050.8	862.9	582.1	436.6	398.8
35°	1008.4	799.8	516.8	385.0	363.3
37.5°	964.9	738.0	454.9	350.6	331.2
40°	920.2	676.1	391.9	317.4	302.5
42.5°	874.3	615.4	348.4	289.9	276.2
45°	827.3	556.9	316.3	261.3	249.8
47.5°	776.9	498.5	285.3	237.2	226.9
50°	729.9	442.3	254.4	215.4	207.4
52.5°	679.5	387.3	229.2	195.9	189.1
55°	629.1	334.6	205.1	177.6	171.9
57.5°	579.8	284.2	182.2	160.4	155.8
60°	529.4	244.1	162.7	144.4	139.8
62.5°	477.8	212.0	144.4	129.5	124.9
65°	426.3	182.2	126.0	114.6	111.2
67.5°	372.4	153.6	110.0	100.8	98.5
70°	319.7	128.3	95.1	87.1	84.8
72.5°	268.1	104.3	80.2	74.5	72.2
75°	214.3	83.7	65.3	61.9	60.7
77.5°	167.3	65.3	52.7	50.4	49.3
80°	122.6	48.1	41.3	39.0	37.8
82.5°	81.4	33.2	29.8	28.6	27.5
85°	42.4	20.6	18.3	18.3	17.2
87.5°	13.8	9.2	9.2	9.2	8.0
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	20.92	22.39	21.29	22.71	23.02	15.73	17.20	16.09	17.51	17.82
	3H	23.25	24.57	23.63	24.90	25.26	17.38	18.69	17.75	19.02	19.38
	4H	24.15	25.38	24.55	25.73	26.11	18.01	19.25	18.41	19.59	19.97
	6H	24.81	25.95	25.22	26.32	26.71	18.51	19.65	18.92	20.01	20.40
	8H	25.02	26.10	25.45	26.49	26.90	18.67	19.76	19.10	20.15	20.55
	12H	25.14	26.17	25.57	26.56	26.98	18.79	19.83	19.22	20.21	20.64
4H	2H	20.94	22.17	21.34	22.52	22.90	16.44	17.68	16.84	18.03	18.41
	3H	23.35	24.38	23.76	24.78	25.18	18.29	19.32	18.70	19.72	20.12
	4H	24.28	25.20	24.72	25.62	26.06	19.04	19.96	19.47	20.38	20.82
	6H	25.06	25.86	25.52	26.31	26.77	19.65	20.46	20.11	20.90	21.36
	8H	25.33	26.08	25.80	26.52	26.99	19.87	20.62	20.34	21.06	21.53
	12H	25.51	26.18	25.99	26.65	27.13	20.03	20.70	20.52	21.18	21.65
8H	4H	24.28	25.02	24.74	25.47	25.94	19.42	20.17	19.88	20.61	21.08
	6H	25.08	25.70	25.58	26.19	26.67	20.16	20.77	20.65	21.27	21.74
	8H	25.38	25.94	25.90	26.45	26.94	20.45	21.01	20.97	21.52	22.01
	12H	25.62	26.10	26.13	26.60	27.16	20.70	21.18	21.21	21.68	22.24
12H	4H	24.26	24.92	24.74	25.40	25.87	19.48	20.14	19.96	20.62	21.09
	6H	25.06	25.61	25.57	26.12	26.61	20.24	20.80	20.76	21.31	21.80
	8H	25.39	25.88	25.90	26.37	26.94	20.60	21.09	21.11	21.58	22.15