

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055282

Luminaire Tested: S122R3DR-H1005D835-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055282  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H1005D835-X4F0-XX-UDD-FLL-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

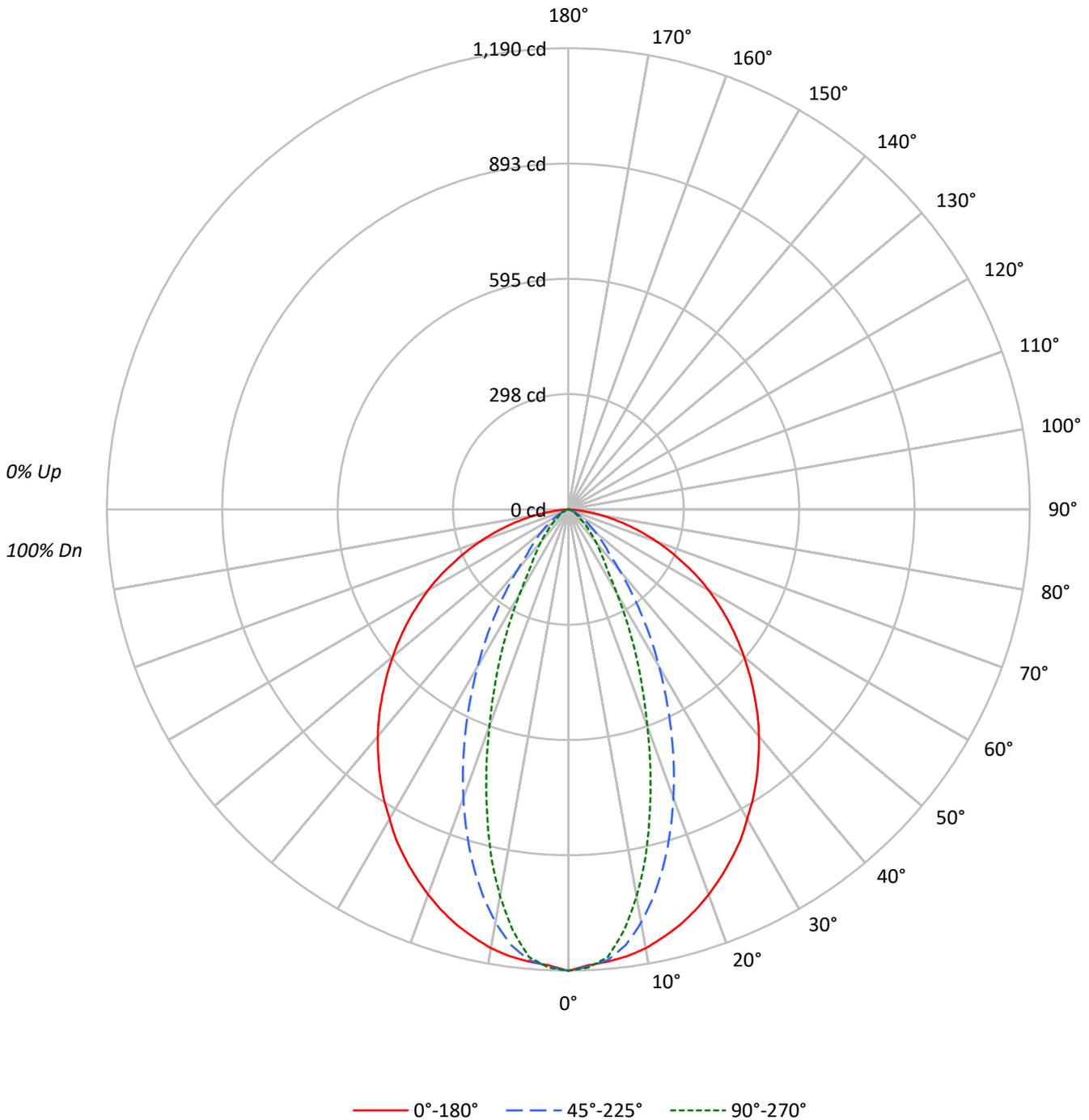
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1364.3 lumens  
Efficiency: N/A  
Efficacy: 37.3 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81  
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	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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

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

	0°	45°	90°
0°	22553	22553	22553
5°	22280	22196	22057
10°	22116	20825	19506
15°	21776	18628	15909
20°	21325	15972	12000
25°	20800	13084	8569
30°	20170	10212	5458
35°	19571	7491	3645
40°	18908	5050	2743
45°	18177	3558	1953
50°	17414	2709	1376
55°	16674	1879	1011
60°	15865	1273	830
65°	14713	915	655
70°	13416	726	565
75°	11639	644	425
80°	9230	480	480
85°	5065	630	326

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18177 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.8	8.0
10°-20°	267.1	19.6
20°-30°	305.2	22.4
30°-40°	258.8	19.0
40°-50°	193.1	14.2
50°-60°	124.8	9.1
60°-70°	69.6	5.1
70°-80°	30.6	2.2
80°-90°	6.3	0.5
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°	681.2	49.9
0°-40°	939.9	68.9
0°-60°	1257.9	92.2
0°-90°	1364.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1364.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1190	1190	1190	1190	1190	
5°	1172	1186	1167	1155	1160	111
15°	1110	1082	950	849	811	313
25°	995	878	626	458	410	458
35°	846	638	324	176	158	529
45°	678	403	133	86	73	523
55°	505	191	57	35	31	451
65°	328	70	20	16	15	326
75°	159	15	9	7	6	170
85°	23	2	3	2	2	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1190.4	1190.4	1190.4	1190.4	1190.4
2.5°	1177.3	1194.8	1180.2	1180.2	1183.2
5°	1171.5	1186.1	1167.1	1155.4	1159.8
7.5°	1162.7	1172.9	1133.6	1098.5	1095.6
10°	1149.6	1154.0	1082.5	1028.5	1013.9
12.5°	1130.6	1120.4	1019.8	943.9	919.1
15°	1110.2	1082.5	949.7	849.1	811.1
17.5°	1085.4	1035.8	872.4	749.9	703.2
20°	1057.7	987.7	792.2	646.3	595.2
22.5°	1027.1	933.7	709.0	548.5	497.5
25°	995.0	878.2	625.9	458.1	409.9
27.5°	961.4	819.9	544.2	376.4	323.9
30°	922.0	760.1	466.8	297.6	249.5
32.5°	885.5	697.3	395.4	230.5	189.7
35°	846.2	637.5	323.9	176.5	157.6
37.5°	805.3	577.7	261.1	148.8	132.8
40°	764.5	517.9	204.2	125.5	110.9
42.5°	722.1	459.5	157.6	105.0	90.5
45°	678.4	402.7	132.8	86.1	72.9
47.5°	634.6	345.8	110.9	68.6	58.4
50°	590.8	291.8	91.9	54.0	46.7
52.5°	548.5	240.7	72.9	43.8	37.9
55°	504.8	191.1	56.9	35.0	30.6
57.5°	461.0	148.8	43.8	29.2	26.3
60°	418.7	112.3	33.6	23.3	21.9
62.5°	374.9	90.5	26.3	19.0	17.5
65°	328.2	70.0	20.4	16.0	14.6
67.5°	285.9	51.1	16.0	13.1	11.7
70°	242.2	35.0	13.1	11.7	10.2
72.5°	199.9	21.9	10.2	8.8	8.8
75°	159.0	14.6	8.8	7.3	5.8
77.5°	121.1	8.8	5.8	5.8	4.4
80°	84.6	5.8	4.4	4.4	4.4
82.5°	52.5	4.4	2.9	2.9	2.9
85°	23.3	1.5	2.9	1.5	1.5
87.5°	4.4	1.5	1.5	1.5	1.5
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	19.08	20.40	19.44	20.71	21.02	5.39	6.71	5.76	7.02	7.34
	3H	21.55	22.72	21.93	23.05	23.41	6.24	7.41	6.62	7.74	8.11
	4H	22.50	23.59	22.91	23.95	24.33	6.52	7.61	6.92	7.96	8.34
	6H	23.19	24.19	23.61	24.56	24.96	6.71	7.71	7.12	8.08	8.48
	8H	23.39	24.34	23.82	24.73	25.13	6.78	7.73	7.21	8.12	8.53
	12H	23.47	24.38	23.90	24.76	25.19	6.81	7.72	7.24	8.10	8.53
4H	2H	18.86	19.95	19.26	20.30	20.69	5.96	7.05	6.37	7.41	7.79
	3H	21.35	22.24	21.76	22.64	23.05	6.99	7.89	7.41	8.29	8.70
	4H	22.29	23.09	22.72	23.51	23.95	7.36	8.16	7.80	8.58	9.02
	6H	23.04	23.74	23.51	24.18	24.65	7.66	8.35	8.12	8.79	9.26
	8H	23.29	23.93	23.76	24.38	24.85	7.75	8.40	8.22	8.84	9.32
	12H	23.42	23.99	23.90	24.47	24.94	7.80	8.37	8.29	8.85	9.33
8H	4H	22.16	22.80	22.63	23.25	23.72	7.73	8.38	8.20	8.82	9.30
	6H	22.90	23.42	23.40	23.92	24.40	8.09	8.62	8.60	9.12	9.60
	8H	23.14	23.61	23.66	24.13	24.62	8.23	8.70	8.75	9.22	9.71
	12H	23.29	23.70	23.81	24.20	24.77	8.32	8.73	8.83	9.23	9.80
12H	4H	22.11	22.68	22.60	23.16	23.64	7.85	8.42	8.34	8.91	9.38
	6H	22.84	23.31	23.36	23.82	24.31	8.21	8.68	8.74	9.20	9.69
	8H	23.10	23.51	23.61	24.01	24.58	8.39	8.81	8.91	9.30	9.87