

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: P1058229

Luminaire Tested: S122RDR-H1005D850-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058229  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-55 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H1005D850-X4F0-XX-UDD-WVL-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

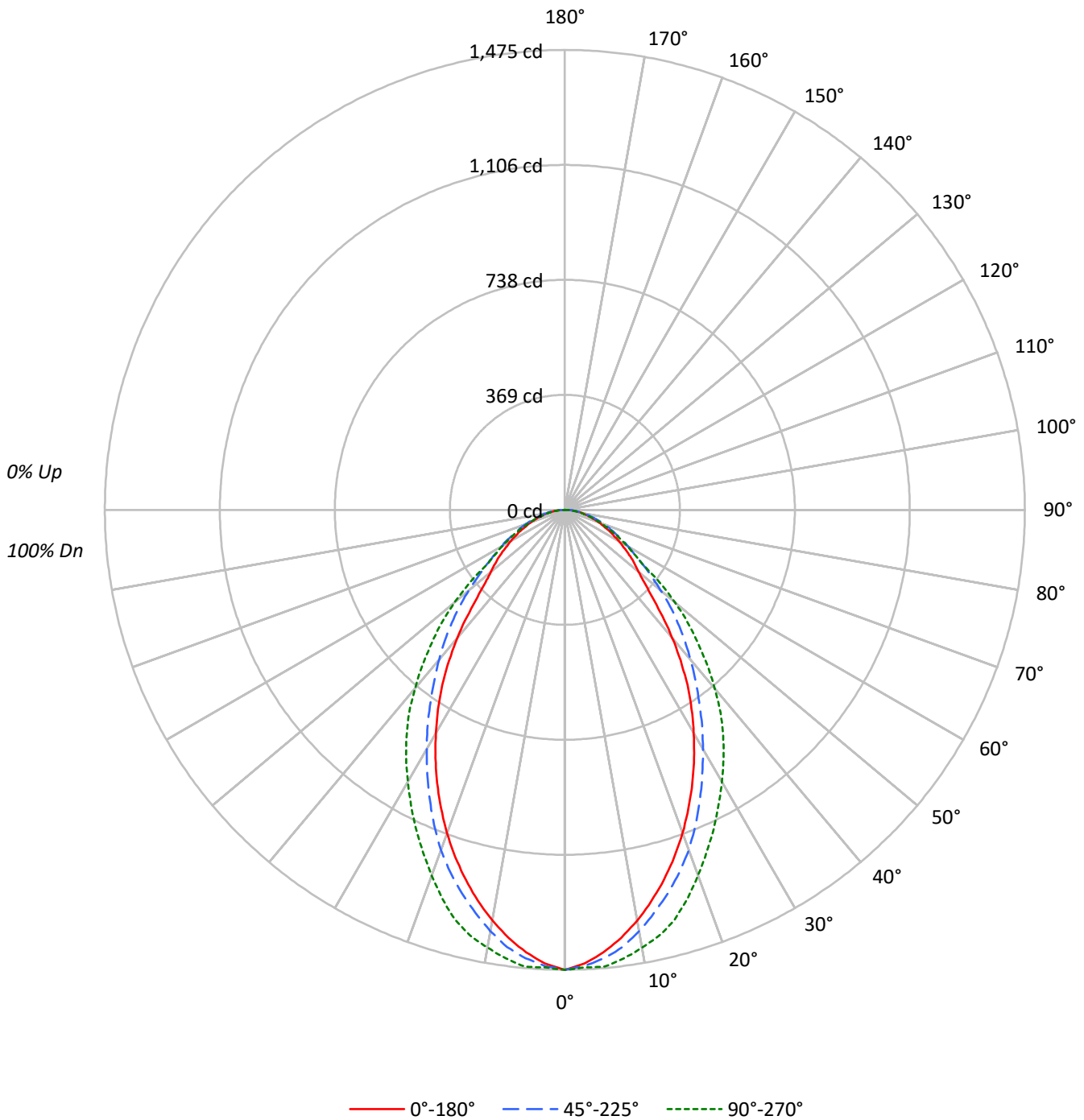
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2404.9 lumens  
Efficiency: N/A  
Efficacy: 65.9 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.5  
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	67				
4	88	77	69	64	85	76	69	63	73	67	62	71	66	62	69	65	61	59				
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52				
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47				
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43				
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39				
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36				
10	59	47	40	35	58	46	40	35	46	39	35	45	39	35	44	38	34	33				

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

	0°	45°	90°
0°	27219	27219	27219
5°	26384	26736	27236
10°	25053	25707	26719
15°	23453	24332	25998
20°	21679	22800	24513
25°	19700	20863	22993
30°	17608	18859	21460
35°	15435	16901	19938
40°	12914	15091	17996
45°	10347	13369	15728
50°	8879	11520	13205
55°	8114	9796	9748
60°	7377	8665	8488
65°	6720	7754	7409
70°	6161	7105	6587
75°	5768	6559	5768
80°	5398	6068	5058
85°	5378	6373	4361

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 15728 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.2	5.7
10°-20°	360.5	15.0
20°-30°	475.5	19.8
30°-40°	478.8	19.9
40°-50°	389.7	16.2
50°-60°	265.7	11.0
60°-70°	172.5	7.2
70°-80°	95.0	3.9
80°-90°	31.0	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°	972.2	40.4
0°-40°	1451.0	60.3
0°-60°	2106.4	87.6
0°-90°	2404.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2404.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1475	1475	1475	1475	1475	
5°	1424	1451	1443	1456	1470	133
15°	1228	1259	1274	1326	1361	344
25°	968	999	1025	1071	1129	444
35°	685	720	750	815	885	426
45°	396	446	512	557	603	312
55°	252	278	304	306	303	226
65°	154	182	178	168	170	153
75°	81	100	92	82	81	86
85°	25	33	30	24	21	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1475.1	1475.1	1475.1	1475.1	1475.1
2.5°	1456.1	1479.9	1464.0	1465.6	1468.8
5°	1424.4	1451.3	1443.4	1456.1	1470.4
7.5°	1384.7	1411.7	1414.9	1433.9	1451.3
10°	1337.1	1367.3	1372.0	1400.6	1426.0
12.5°	1284.8	1318.1	1324.4	1365.7	1399.0
15°	1227.7	1259.4	1273.7	1326.0	1360.9
17.5°	1167.4	1197.6	1219.8	1267.3	1307.0
20°	1104.0	1132.5	1161.1	1203.9	1248.3
22.5°	1035.8	1067.5	1094.4	1137.3	1188.0
25°	967.6	999.3	1024.7	1070.7	1129.3
27.5°	897.8	929.5	954.9	1004.0	1067.5
30°	826.4	859.7	885.1	940.6	1007.2
32.5°	756.6	789.9	818.5	877.1	946.9
35°	685.2	720.1	750.3	815.3	885.1
37.5°	609.1	648.7	686.8	751.8	820.0
40°	536.1	580.5	626.5	686.8	747.1
42.5°	463.2	512.3	569.4	620.2	675.7
45°	396.5	445.7	512.3	556.7	602.7
47.5°	344.2	385.4	456.8	493.3	534.5
50°	309.3	337.9	401.3	429.8	460.0
52.5°	280.8	304.5	349.0	368.0	383.9
55°	252.2	277.6	304.5	306.1	303.0
57.5°	223.6	252.2	266.5	255.4	261.7
60°	199.9	228.4	234.8	223.6	230.0
62.5°	174.5	206.2	206.2	195.1	198.3
65°	153.9	182.4	177.6	168.1	169.7
67.5°	133.2	161.8	153.9	144.3	144.3
70°	114.2	141.2	131.7	122.1	122.1
72.5°	96.8	119.0	112.6	101.5	99.9
75°	80.9	99.9	92.0	82.5	80.9
77.5°	65.0	80.9	74.5	66.6	63.4
80°	50.8	65.0	57.1	50.8	47.6
82.5°	38.1	49.2	42.8	36.5	33.3
85°	25.4	33.3	30.1	23.8	20.6
87.5°	12.7	22.2	19.0	15.9	12.7
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	18.20	19.64	18.56	19.95	20.26	18.45	19.88	18.81	20.20	20.51
	3H	19.73	21.01	20.10	21.34	21.70	19.80	21.09	20.18	21.42	21.78
	4H	20.29	21.49	20.69	21.84	22.22	20.28	21.49	20.69	21.84	22.22
	6H	20.71	21.82	21.13	22.19	22.58	20.63	21.74	21.05	22.11	22.50
	8H	20.86	21.92	21.29	22.31	22.71	20.74	21.80	21.17	22.19	22.59
	12H	20.98	21.99	21.41	22.37	22.80	20.81	21.82	21.24	22.20	22.63
4H	2H	18.77	19.97	19.17	20.32	20.70	18.97	20.17	19.37	20.52	20.90
	3H	20.57	21.57	20.99	21.97	22.38	20.54	21.54	20.96	21.94	22.35
	4H	21.32	22.21	21.75	22.63	23.07	21.14	22.03	21.57	22.45	22.89
	6H	21.90	22.68	22.36	23.13	23.59	21.61	22.39	22.07	22.83	23.29
	8H	22.11	22.84	22.58	23.29	23.76	21.76	22.48	22.22	22.93	23.40
	12H	22.28	22.93	22.76	23.41	23.88	21.86	22.51	22.35	22.99	23.47
8H	4H	21.58	22.31	22.05	22.75	23.22	21.43	22.16	21.89	22.60	23.07
	6H	22.34	22.94	22.83	23.43	23.91	22.02	22.62	22.52	23.11	23.59
	8H	22.66	23.20	23.18	23.71	24.20	22.24	22.78	22.76	23.29	23.78
	12H	22.94	23.42	23.45	23.91	24.48	22.42	22.90	22.93	23.39	23.96
12H	4H	21.59	22.24	22.08	22.72	23.20	21.46	22.11	21.94	22.59	23.06
	6H	22.38	22.92	22.90	23.43	23.92	22.09	22.63	22.60	23.14	23.63
	8H	22.78	23.26	23.29	23.75	24.32	22.37	22.85	22.88	23.34	23.91