

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: P242386

Luminaire Tested: S122RDRP-S1005D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242386  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-S1005D940-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

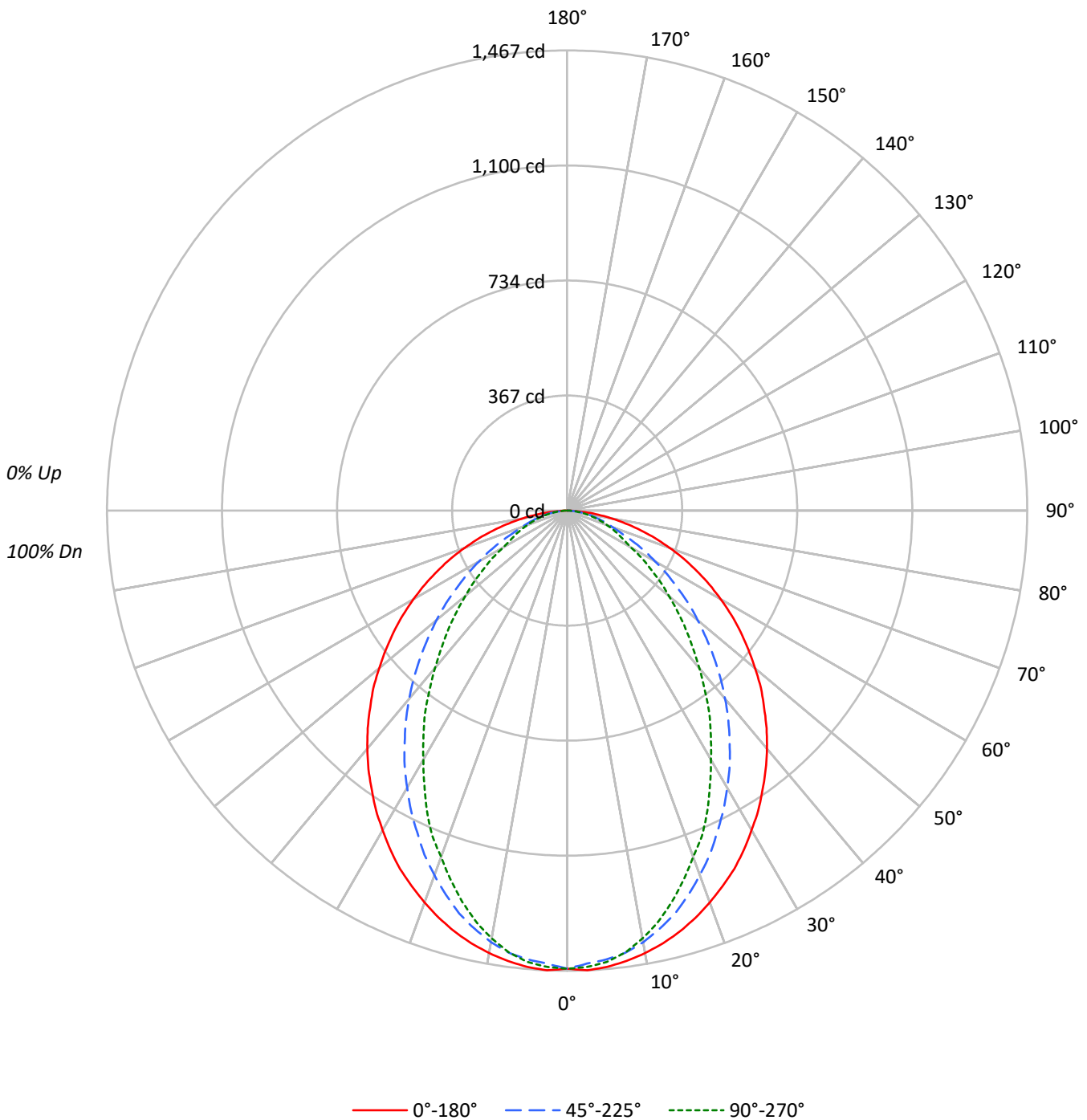
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3003.4 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.1  
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

TEST NUMBER: P242386

CATALOG NUMBER: S122RDRP-S1005D940-X4F0-XX-UDD-F-W

### 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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86													86															
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74													74															
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64													64															
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55													55															
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49													49															
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43													43															
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39													39															
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35													35															
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32													32															
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29													29															

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

	0°	45°	90°
0°	27815	27815	27815
5°	27922	27468	27620
10°	27709	27018	26788
15°	27391	26217	25462
20°	26949	25074	23815
25°	26498	23776	22221
30°	25870	22441	20173
35°	25260	20988	18377
40°	24646	19487	16299
45°	23923	17800	14417
50°	23185	16097	12570
55°	22426	14263	10796
60°	21547	12335	8960
65°	20548	10366	8162
70°	19358	8538	7507
75°	17898	7779	7006
80°	15807	6954	6373
85°	12414	5486	5486

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 23923 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.9	4.6
10°-20°	375.7	12.5
20°-30°	527.5	17.6
30°-40°	575.0	19.1
40°-50°	528.5	17.6
50°-60°	415.0	13.8
60°-70°	270.2	9.0
70°-80°	139.1	4.6
80°-90°	35.5	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°	1040.1	34.6
0°-40°	1615.1	53.8
0°-60°	2558.7	85.2
0°-90°	3003.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3003.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1460	1460	1460	1460	1460	
5°	1460	1454	1437	1448	1444	138
15°	1389	1374	1330	1304	1291	391
25°	1261	1218	1131	1077	1057	580
35°	1086	1019	903	819	790	680
45°	888	800	661	567	535	686
55°	675	572	430	350	325	603
65°	456	349	230	185	181	452
75°	243	151	106	96	95	257
85°	57	29	25	25	25	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1460.3	1460.3	1460.3	1460.3	1460.3
2.5°	1467.0	1460.3	1445.8	1459.0	1456.4
5°	1460.3	1453.7	1436.6	1448.5	1444.5
7.5°	1448.5	1440.5	1422.0	1427.3	1420.7
10°	1432.6	1423.3	1396.9	1392.9	1385.0
12.5°	1412.8	1400.9	1365.2	1357.3	1342.7
15°	1389.0	1374.4	1329.5	1304.4	1291.2
17.5°	1361.2	1340.1	1284.6	1255.5	1234.4
20°	1329.5	1303.1	1237.0	1204.0	1174.9
22.5°	1295.2	1264.8	1188.1	1143.2	1123.3
25°	1260.8	1218.5	1131.3	1077.1	1057.3
27.5°	1219.8	1174.9	1078.4	1016.3	985.9
30°	1176.2	1126.0	1020.3	952.9	917.2
32.5°	1133.9	1073.1	964.8	885.5	852.4
35°	1086.3	1018.9	902.6	819.4	790.3
37.5°	1040.1	967.4	844.5	753.3	720.3
40°	991.2	911.9	783.7	689.9	655.5
42.5°	941.0	856.4	722.9	625.1	592.1
45°	888.1	799.6	660.8	567.0	535.2
47.5°	837.9	744.1	601.3	507.5	478.4
50°	782.4	688.5	543.2	452.0	424.2
52.5°	728.2	629.1	487.7	400.4	375.3
55°	675.3	572.2	429.5	350.2	325.1
57.5°	621.1	515.4	378.0	304.0	282.8
60°	565.6	459.9	323.8	256.4	235.2
62.5°	511.5	405.7	277.5	214.1	203.5
65°	455.9	348.9	230.0	185.0	181.1
67.5°	403.1	296.0	185.0	162.6	158.6
70°	347.6	244.5	153.3	140.1	134.8
72.5°	294.7	196.9	128.2	117.6	115.0
75°	243.2	150.7	105.7	96.5	95.2
77.5°	191.6	107.0	83.3	78.0	75.3
80°	144.1	76.7	63.4	58.1	58.1
82.5°	100.4	51.5	43.6	41.0	41.0
85°	56.8	29.1	25.1	25.1	25.1
87.5°	21.1	10.6	10.6	9.3	9.3
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	22.79	24.31	23.15	24.62	24.94	18.75	20.27	19.11	20.58	20.90
	3H	24.55	25.92	24.93	26.25	26.61	20.02	21.38	20.39	21.71	22.07
	4H	25.22	26.50	25.62	26.85	27.23	20.52	21.80	20.92	22.15	22.52
	6H	25.71	26.89	26.12	27.26	27.65	20.90	22.08	21.31	22.45	22.84
	8H	25.87	27.00	26.30	27.39	27.79	21.02	22.15	21.45	22.54	22.94
	12H	25.98	27.06	26.41	27.44	27.87	21.10	22.18	21.53	22.56	22.99
4H	2H	22.89	24.17	23.29	24.52	24.90	19.45	20.73	19.85	21.07	21.45
	3H	24.83	25.89	25.24	26.29	26.69	20.89	21.95	21.30	22.35	22.75
	4H	25.58	26.53	26.01	26.95	27.39	21.49	22.45	21.92	22.86	23.30
	6H	26.17	27.00	26.63	27.44	27.90	21.98	22.81	22.43	23.25	23.71
	8H	26.38	27.16	26.85	27.60	28.07	22.14	22.92	22.60	23.36	23.83
	12H	26.54	27.23	27.02	27.71	28.18	22.26	22.95	22.74	23.43	23.90
8H	4H	25.60	26.38	26.06	26.82	27.29	21.84	22.62	22.31	23.06	23.53
	6H	26.24	26.88	26.73	27.37	27.85	22.43	23.07	22.92	23.56	24.04
	8H	26.49	27.06	27.00	27.57	28.06	22.65	23.23	23.16	23.74	24.22
	12H	26.69	27.20	27.20	27.69	28.26	22.83	23.34	23.34	23.83	24.40
12H	4H	25.58	26.28	26.07	26.76	27.23	21.89	22.58	22.37	23.06	23.53
	6H	26.22	26.80	26.73	27.31	27.79	22.49	23.07	23.01	23.58	24.07
	8H	26.50	27.01	27.01	27.50	28.07	22.77	23.28	23.27	23.77	24.33