

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: P243235

Luminaire Tested: S122RDRP-H865D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243235  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-H865D930-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

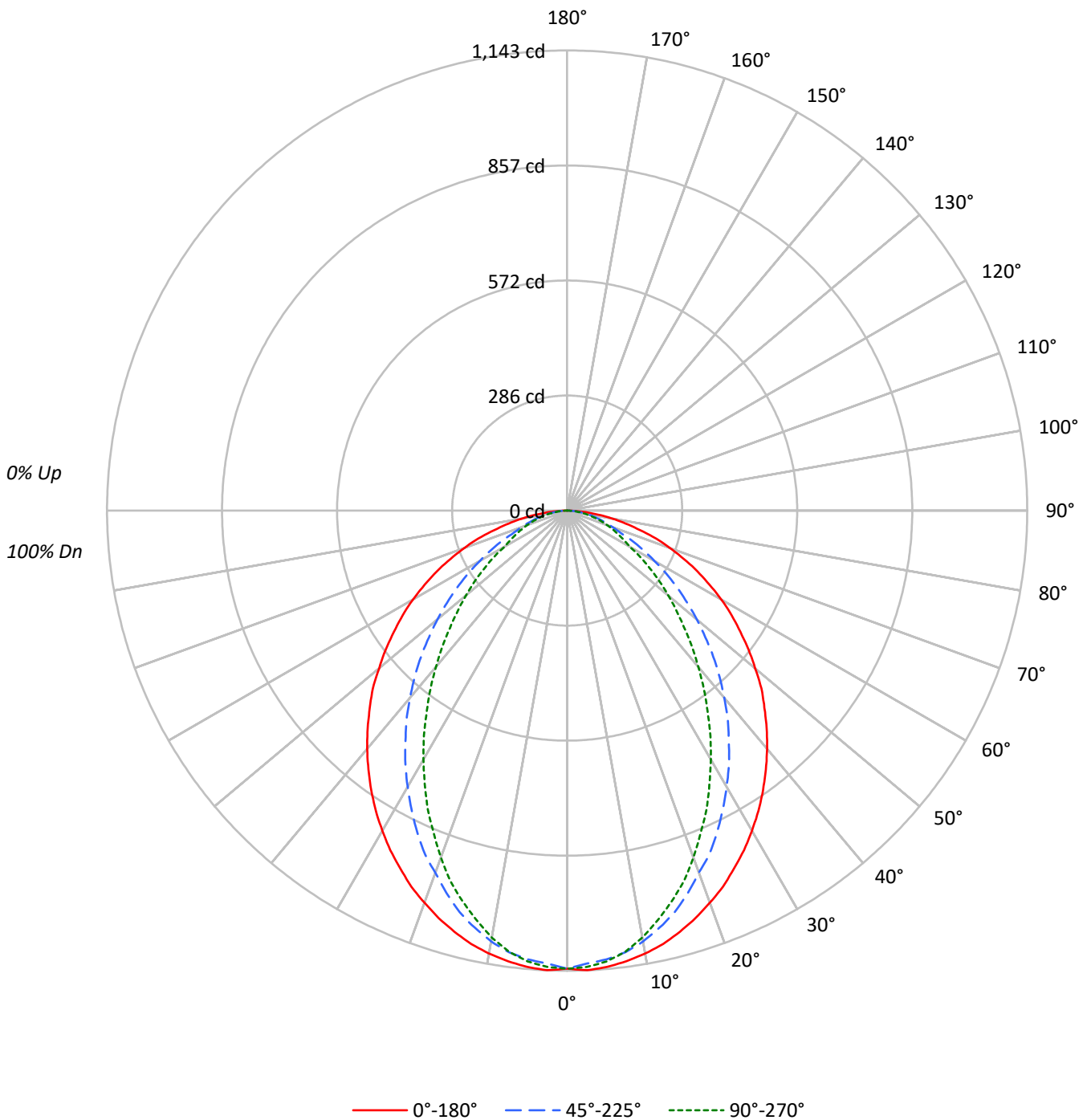
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2333.4 lumens  
Efficiency: N/A  
Efficacy: 74.1 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): 31.5  
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

TEST NUMBER: P243235

CATALOG NUMBER: S122RDRP-H865D930-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P243235

CATALOG NUMBER: S122RDRP-H865D930-X4F0-XX-UDD-F-W

**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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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

	0°	45°	90°
0°	21672	21672	21672
5°	21755	21398	21491
10°	21608	21018	20829
15°	21352	20364	19804
20°	21014	19403	18586
25°	20611	18528	17206
30°	20189	17424	15697
35°	19723	16277	14131
40°	19211	15086	12597
45°	18670	13830	11079
50°	18064	12452	9717
55°	17441	11085	8379
60°	16865	9535	6846
65°	16104	8054	6328
70°	15143	6672	5903
75°	13799	6072	5417
80°	12384	5386	4848
85°	10294	4502	4284

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18670 cd/sqm



TEST NUMBER: P243235

CATALOG NUMBER: S122RDRP-H865D930-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.6	4.6
10°-20°	292.1	12.5
20°-30°	409.7	17.6
30°-40°	446.3	19.1
40°-50°	410.2	17.6
50°-60°	321.9	13.8
60°-70°	210.0	9.0
70°-80°	108.6	4.7
80°-90°	28.1	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°	808.4	34.6
0°-40°	1254.6	53.8
0°-60°	1986.7	85.1
0°-90°	2333.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2333.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1138	1138	1138	1138	1138	
5°	1138	1132	1119	1127	1124	108
15°	1083	1070	1033	1012	1004	305
25°	981	946	882	838	819	452
35°	848	792	700	635	608	530
45°	693	622	513	439	411	535
55°	525	447	334	271	252	471
65°	357	271	179	145	140	353
75°	188	117	82	76	74	201
85°	47	23	21	20	20	54
90°	0	0	0	0	0	



TEST NUMBER: P243235

CATALOG NUMBER: S122RDRP-H865D930-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1137.8	1137.8	1137.8	1137.8	1137.8
2.5°	1142.7	1137.8	1126.0	1136.8	1134.8
5°	1137.8	1131.9	1119.1	1127.0	1124.0
7.5°	1129.0	1123.1	1106.4	1110.3	1105.4
10°	1117.2	1109.3	1086.7	1082.8	1076.9
12.5°	1102.5	1091.7	1061.2	1049.4	1041.6
15°	1082.8	1070.1	1032.7	1012.1	1004.3
17.5°	1061.2	1042.6	996.4	972.9	965.0
20°	1036.7	1015.1	957.2	932.6	916.9
22.5°	1011.2	983.7	923.8	885.5	866.8
25°	980.7	946.4	881.6	838.4	818.7
27.5°	951.3	911.0	837.4	787.3	765.7
30°	917.9	873.7	792.2	734.3	713.7
32.5°	884.5	833.5	748.1	685.2	661.7
35°	848.2	792.2	700.0	635.2	607.7
37.5°	810.9	753.0	655.8	584.1	557.6
40°	772.6	707.8	606.7	532.1	506.6
42.5°	733.3	667.6	560.6	484.0	459.4
45°	693.1	622.4	513.4	438.8	411.3
47.5°	654.8	578.2	465.3	394.6	368.1
50°	609.6	534.0	420.2	348.5	327.9
52.5°	568.4	489.9	376.0	307.3	289.6
55°	525.2	446.7	333.8	270.9	252.3
57.5°	485.0	401.5	291.6	234.6	217.0
60°	442.7	358.3	250.3	198.3	179.7
62.5°	398.6	314.1	214.0	164.9	159.0
65°	357.3	270.9	178.7	145.3	140.4
67.5°	313.2	230.7	142.3	127.6	122.7
70°	271.9	191.4	119.8	109.0	106.0
72.5°	231.7	154.1	101.1	92.3	89.3
75°	187.5	116.8	82.5	75.6	73.6
77.5°	149.2	82.5	65.8	60.9	58.9
80°	112.9	59.9	49.1	46.1	44.2
82.5°	77.6	40.2	34.4	32.4	31.4
85°	47.1	22.6	20.6	19.6	19.6
87.5°	18.7	8.8	8.8	7.9	7.9
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243235  
 CATALOG NUMBER: S122RDRP-H865D930-X4F0-XX-UDD-F-W

**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	21.93	23.46	22.30	23.77	24.08	17.82	19.34	18.18	19.65	19.97
	3H	23.70	25.07	24.08	25.39	25.76	19.11	20.48	19.49	20.81	21.17
	4H	24.36	25.64	24.76	25.99	26.37	19.62	20.90	20.02	21.25	21.63
	6H	24.85	26.03	25.26	26.40	26.79	20.00	21.19	20.42	21.55	21.94
	8H	25.02	26.14	25.44	26.53	26.93	20.13	21.25	20.55	21.64	22.04
	12H	25.13	26.20	25.56	26.59	27.02	20.21	21.29	20.64	21.67	22.10
4H	2H	22.04	23.32	22.43	23.67	24.04	18.53	19.81	18.93	20.16	20.53
	3H	23.97	25.04	24.38	25.44	25.84	20.00	21.06	20.41	21.46	21.86
	4H	24.72	25.67	25.15	26.09	26.53	20.60	21.56	21.04	21.98	22.42
	6H	25.31	26.14	25.77	26.58	27.04	21.10	21.93	21.55	22.37	22.83
	8H	25.52	26.30	25.99	26.74	27.21	21.26	22.03	21.72	22.48	22.95
	12H	25.68	26.38	26.17	26.86	27.33	21.37	22.07	21.86	22.55	23.02
8H	4H	24.74	25.52	25.21	25.96	26.43	20.97	21.74	21.43	22.19	22.65
	6H	25.38	26.02	25.88	26.51	26.99	21.56	22.20	22.06	22.69	23.17
	8H	25.63	26.21	26.14	26.72	27.20	21.78	22.36	22.29	22.87	23.36
	12H	25.84	26.35	26.35	26.85	27.41	21.96	22.47	22.47	22.96	23.53
12H	4H	24.73	25.42	25.21	25.90	26.37	21.01	21.70	21.49	22.18	22.65
	6H	25.36	25.94	25.87	26.45	26.94	21.62	22.20	22.14	22.71	23.20
	8H	25.64	26.15	26.15	26.65	27.21	21.90	22.41	22.41	22.90	23.47