

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: P242721

Luminaire Tested: S124RDRP-S350D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242721  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S350D935-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

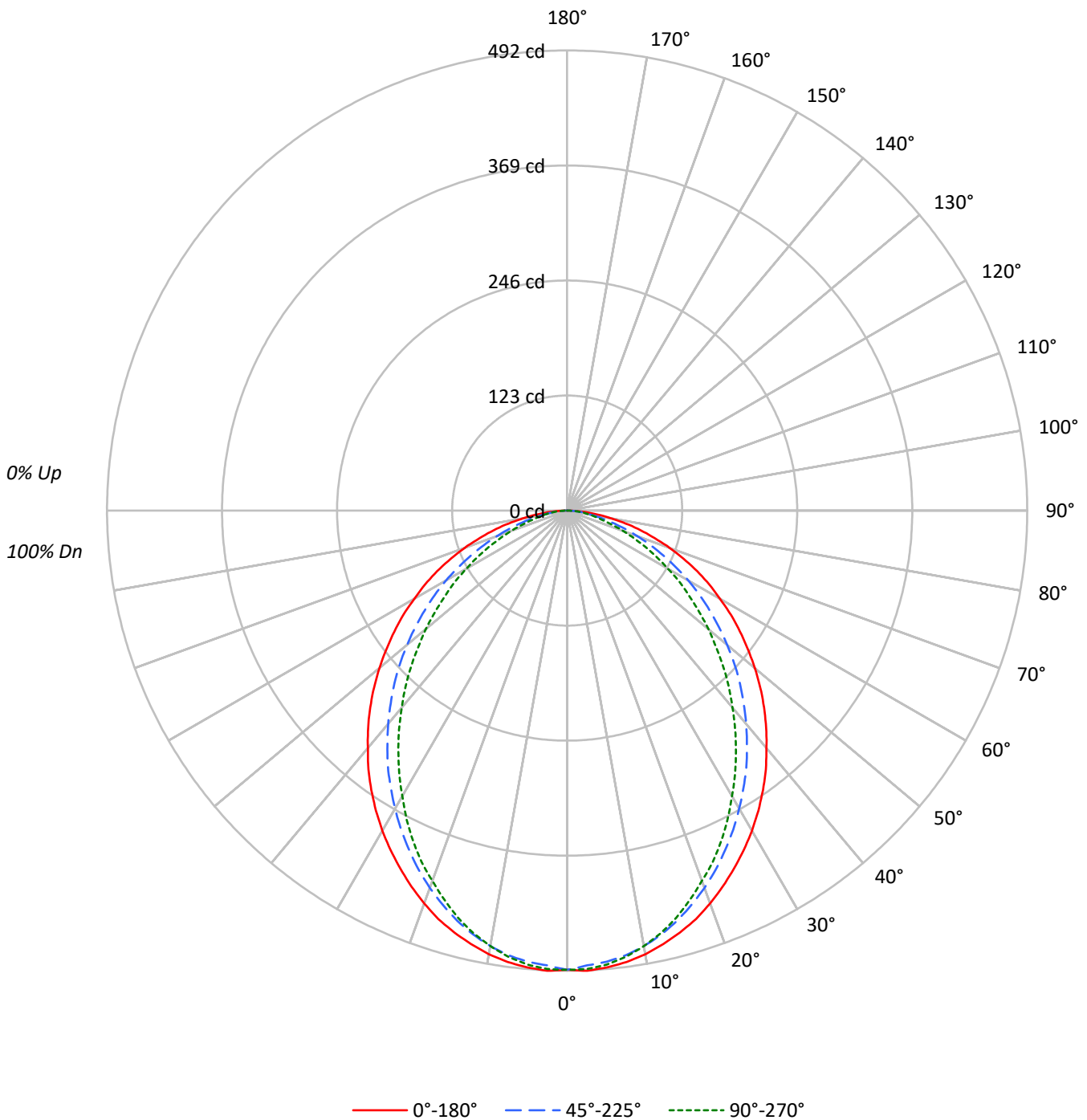
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1134.4 lumens  
Efficiency: N/A  
Efficacy: 97.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.6  
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: P242721

CATALOG NUMBER: S124RDRP-S350D935-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242721

CATALOG NUMBER: S124RDRP-S350D935-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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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

	0°	45°	90°
0°	4364	4364	4364
5°	4374	4320	4347
10°	4347	4268	4268
15°	4297	4179	4148
20°	4228	4061	3986
25°	4141	3923	3823
30°	4055	3777	3619
35°	3961	3627	3415
40°	3848	3454	3193
45°	3742	3285	2968
50°	3623	3088	2730
55°	3496	2884	2470
60°	3355	2660	2206
65°	3226	2381	1946
70°	3038	2071	1650
75°	2802	1717	1343
80°	2442	1310	1234
85°	2070	1193	1112

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3742 cd/sqm



TEST NUMBER: P242721

CATALOG NUMBER: S124RDRP-S350D935-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.2	4.1
10°-20°	128.7	11.3
20°-30°	185.8	16.4
30°-40°	210.6	18.6
40°-50°	203.4	17.9
50°-60°	169.1	14.9
60°-70°	116.7	10.3
70°-80°	59.0	5.2
80°-90°	15.0	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°	360.7	31.8
0°-40°	571.4	50.4
0°-60°	943.8	83.2
0°-90°	1134.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1134.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	491	491	491	491	491	
5°	490	489	484	488	487	47
15°	467	464	454	453	451	132
25°	422	415	400	394	390	195
35°	365	353	334	321	315	228
45°	298	284	261	243	236	230
55°	226	210	186	166	159	202
65°	153	137	113	97	92	151
75°	82	68	50	41	39	86
85°	20	13	12	11	11	23
90°	0	0	0	0	0	



TEST NUMBER: P242721

CATALOG NUMBER: S124RDRP-S350D935-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	491.0	491.0	491.0	491.0	491.0
2.5°	492.5	491.0	486.8	491.0	490.6
5°	490.2	488.7	484.2	488.0	487.2
7.5°	486.8	485.3	479.7	482.3	481.2
10°	481.6	479.7	472.9	474.4	472.9
12.5°	474.8	472.5	464.3	465.0	462.8
15°	466.9	463.5	454.1	453.4	450.7
17.5°	457.9	453.0	442.1	440.2	436.5
20°	447.0	442.1	429.3	426.3	421.4
22.5°	435.0	429.3	415.4	410.5	406.8
25°	422.2	415.4	400.0	393.6	389.8
27.5°	409.0	400.7	384.6	377.1	371.8
30°	395.1	385.7	368.0	358.6	352.6
32.5°	380.4	369.5	351.1	339.8	334.2
35°	365.0	353.0	334.2	321.4	314.7
37.5°	348.9	336.5	315.8	301.9	295.1
40°	331.6	319.2	297.7	281.9	275.2
42.5°	315.0	301.9	279.3	263.2	256.0
45°	297.7	283.8	261.3	242.9	236.1
47.5°	280.1	265.8	242.5	223.3	215.8
50°	262.0	247.4	223.3	204.5	197.4
52.5°	243.6	229.3	204.5	185.3	177.8
55°	225.6	210.5	186.1	166.5	159.4
57.5°	207.9	192.1	168.0	148.1	142.9
60°	188.7	173.7	149.6	130.1	124.1
62.5°	171.4	155.6	130.8	113.2	108.6
65°	153.4	137.2	113.2	97.0	92.5
67.5°	134.6	119.2	96.6	82.3	77.1
70°	116.9	101.1	79.7	67.3	63.5
72.5°	98.1	84.2	64.3	54.1	50.8
75°	81.6	67.7	50.0	41.4	39.1
77.5°	64.3	52.3	37.2	31.2	30.5
80°	47.7	36.8	25.6	24.4	24.1
82.5°	33.5	23.7	18.4	17.7	17.3
85°	20.3	12.8	11.7	10.9	10.9
87.5°	8.6	5.6	5.3	4.9	5.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242721  
 CATALOG NUMBER: S124RDRP-S350D935-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	16.46	18.03	16.83	18.34	18.66	14.49	16.06	14.86	16.37	16.69
	3H	18.23	19.64	18.61	19.97	20.33	15.75	17.16	16.12	17.48	17.84
	4H	18.89	20.22	19.29	20.57	20.94	16.12	17.45	16.52	17.79	18.17
	6H	19.37	20.59	19.78	20.96	21.35	16.39	17.61	16.80	17.97	18.37
	8H	19.52	20.69	19.94	21.07	21.48	16.48	17.65	16.90	18.03	18.43
	12H	19.62	20.73	20.05	21.12	21.55	16.54	17.66	16.97	18.04	18.47
4H	2H	16.80	18.12	17.20	18.47	18.85	15.19	16.51	15.59	16.86	17.24
	3H	18.77	19.87	19.18	20.27	20.67	16.62	17.72	17.03	18.12	18.52
	4H	19.55	20.54	19.98	20.96	21.39	17.08	18.07	17.51	18.48	18.92
	6H	20.14	21.01	20.60	21.45	21.91	17.43	18.29	17.88	18.73	19.19
	8H	20.34	21.15	20.80	21.59	22.05	17.55	18.36	18.01	18.80	19.27
	12H	20.48	21.20	20.96	21.68	22.15	17.65	18.37	18.13	18.85	19.32
8H	4H	19.64	20.45	20.10	20.89	21.36	17.39	18.20	17.85	18.64	19.11
	6H	20.31	20.98	20.81	21.47	21.95	17.82	18.49	18.32	18.98	19.46
	8H	20.56	21.16	21.07	21.66	22.15	18.00	18.60	18.51	19.11	19.60
	12H	20.75	21.28	21.26	21.77	22.34	18.16	18.69	18.67	19.18	19.74
12H	4H	19.63	20.36	20.11	20.83	21.30	17.43	18.15	17.91	18.63	19.10
	6H	20.30	20.90	20.82	21.41	21.90	17.87	18.48	18.39	18.98	19.47
	8H	20.59	21.12	21.09	21.61	22.17	18.10	18.63	18.61	19.13	19.69