

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: P243557

Luminaire Tested: S124RDRP-H350D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243557  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H350D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

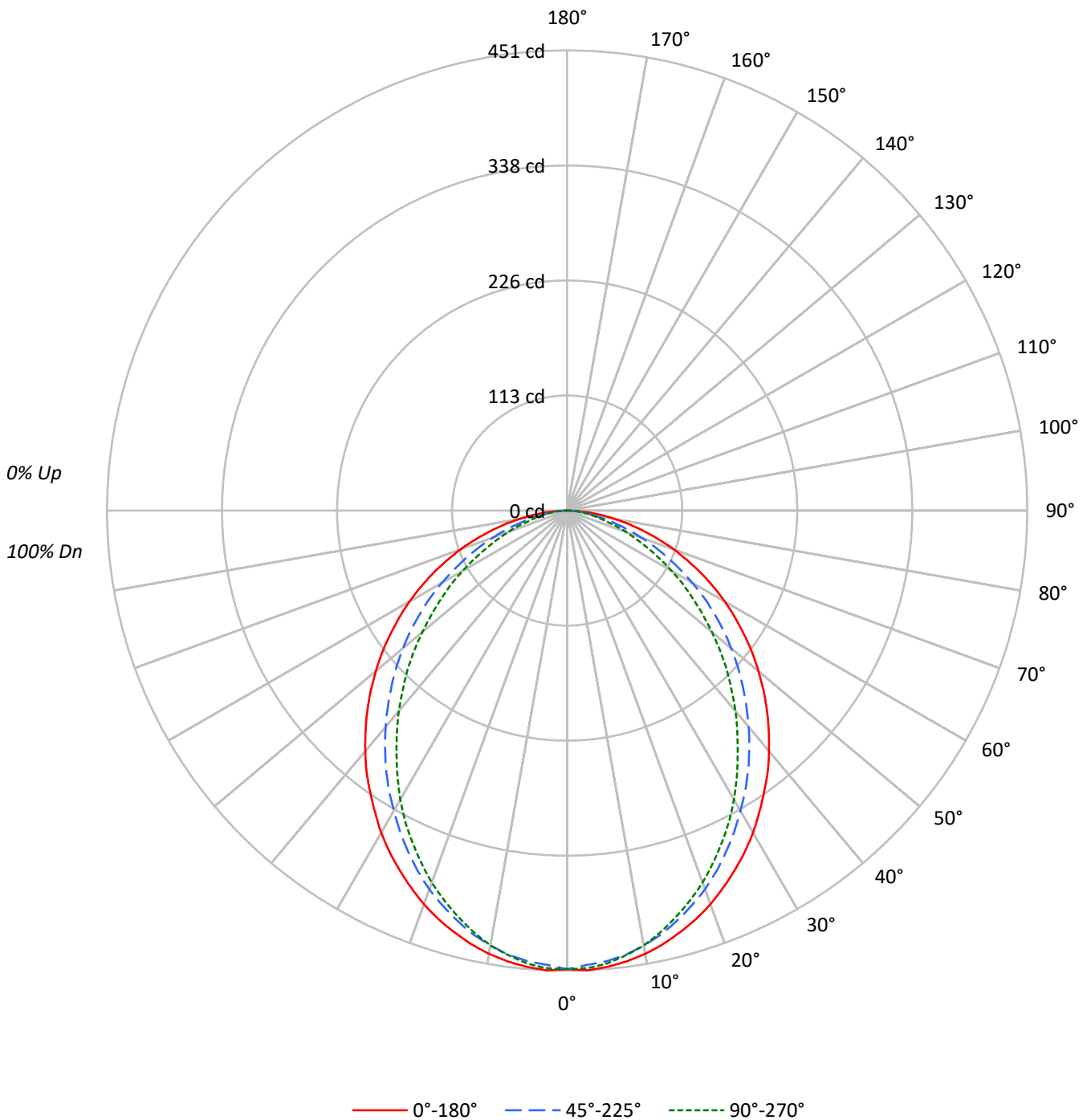
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1059.6 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.2  
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	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36					36			
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33					33			
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30					30			
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27					27			

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

	0°	45°	90°
0°	3995	3995	3995
5°	4006	3956	3977
10°	3981	3906	3906
15°	3937	3830	3793
20°	3884	3736	3670
25°	3812	3617	3519
30°	3741	3486	3356
35°	3653	3357	3163
40°	3572	3213	2979
45°	3481	3060	2784
50°	3384	2903	2560
55°	3279	2724	2334
60°	3177	2517	2100
65°	3041	2274	1834
70°	2895	2009	1596
75°	2675	1673	1298
80°	2447	1305	1188
85°	2162	1254	1183

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3481 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.3	4.0
10°-20°	118.0	11.1
20°-30°	171.1	16.2
30°-40°	195.1	18.4
40°-50°	189.8	17.9
50°-60°	159.4	15.0
60°-70°	111.1	10.5
70°-80°	57.4	5.4
80°-90°	15.5	1.5
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°	331.4	31.3
0°-40°	526.5	49.7
0°-60°	875.7	82.6
0°-90°	1059.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1059.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	449	449	449	449	449	
5°	449	448	443	447	446	43
15°	428	424	416	416	412	121
25°	389	381	369	364	359	179
35°	337	326	309	298	292	211
45°	277	264	243	228	222	214
55°	212	198	176	158	151	189
65°	145	131	108	92	87	143
75°	78	66	49	41	38	83
85°	21	14	12	12	12	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	449.4	449.4	449.4	449.4	449.4
2.5°	451.0	449.7	445.7	449.4	449.0
5°	449.0	447.7	443.4	446.7	445.7
7.5°	445.7	444.1	439.1	441.4	439.7
10°	441.1	439.4	432.8	434.4	432.8
12.5°	435.1	432.8	425.5	425.8	423.2
15°	427.8	424.5	416.2	415.5	412.2
17.5°	419.8	415.5	405.9	404.3	400.6
20°	410.6	405.3	395.0	391.3	388.0
22.5°	399.9	393.6	382.4	378.1	373.7
25°	388.7	381.4	368.8	363.5	358.8
27.5°	377.1	368.4	354.8	348.2	343.6
30°	364.5	354.5	339.6	332.0	327.0
32.5°	350.5	340.6	325.0	315.7	309.4
35°	336.6	326.3	309.4	297.8	291.5
37.5°	323.0	311.4	293.2	281.2	273.9
40°	307.8	295.5	276.9	263.3	256.7
42.5°	292.5	279.9	260.0	245.7	238.4
45°	276.9	263.6	243.4	227.8	221.5
47.5°	261.0	247.7	226.8	210.6	203.3
50°	244.7	231.5	209.9	192.0	185.1
52.5°	228.8	214.9	193.3	175.1	167.8
55°	211.6	198.0	175.8	157.9	150.6
57.5°	195.0	180.7	159.2	140.9	135.0
60°	178.7	164.5	141.6	124.0	118.1
62.5°	161.5	147.2	124.7	107.8	102.5
65°	144.6	130.7	108.1	92.5	87.2
67.5°	127.3	114.7	92.9	77.9	73.6
70°	111.4	97.2	77.3	64.3	61.4
72.5°	94.5	81.9	62.7	52.1	49.7
75°	77.9	66.0	48.7	40.8	37.8
77.5°	62.7	51.1	36.8	30.2	30.2
80°	47.8	37.5	25.5	23.9	23.2
82.5°	33.8	24.2	18.9	17.6	17.2
85°	21.2	13.6	12.3	11.6	11.6
87.5°	10.3	6.3	6.3	6.0	6.0
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	16.26	17.84	16.63	18.15	18.47	14.36	15.94	14.73	16.25	16.57
	3H	18.08	19.50	18.45	19.82	20.18	15.63	17.05	16.00	17.37	17.73
	4H	18.76	20.09	19.16	20.44	20.82	16.02	17.36	16.42	17.70	18.08
	6H	19.28	20.51	19.69	20.87	21.27	16.30	17.54	16.71	17.90	18.29
	8H	19.45	20.62	19.87	21.01	21.41	16.40	17.58	16.83	17.97	18.37
	12H	19.56	20.69	19.99	21.07	21.50	16.48	17.61	16.91	17.99	18.42
4H	2H	16.61	17.95	17.01	18.30	18.67	15.07	16.40	15.47	16.75	17.13
	3H	18.63	19.74	19.04	20.14	20.54	16.52	17.63	16.93	18.03	18.43
	4H	19.44	20.44	19.87	20.86	21.30	17.00	18.00	17.43	18.41	18.85
	6H	20.08	20.96	20.54	21.40	21.86	17.36	18.24	17.82	18.68	19.14
	8H	20.30	21.12	20.76	21.56	22.03	17.50	18.32	17.96	18.76	19.22
	12H	20.47	21.20	20.95	21.68	22.15	17.62	18.35	18.10	18.83	19.30
8H	4H	19.55	20.36	20.01	20.81	21.27	17.33	18.15	17.79	18.59	19.05
	6H	20.27	20.95	20.77	21.44	21.92	17.78	18.46	18.28	18.95	19.42
	8H	20.55	21.15	21.06	21.66	22.15	17.97	18.58	18.49	19.09	19.58
	12H	20.77	21.31	21.28	21.80	22.37	18.16	18.70	18.67	19.19	19.75
12H	4H	19.54	20.27	20.02	20.75	21.22	17.37	18.11	17.86	18.58	19.05
	6H	20.27	20.88	20.78	21.38	21.87	17.84	18.45	18.35	18.96	19.45
	8H	20.58	21.12	21.09	21.61	22.17	18.09	18.63	18.60	19.12	19.68