

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: P243581

Luminaire Tested: S124RDRP-H350D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243581  
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-H350D935-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

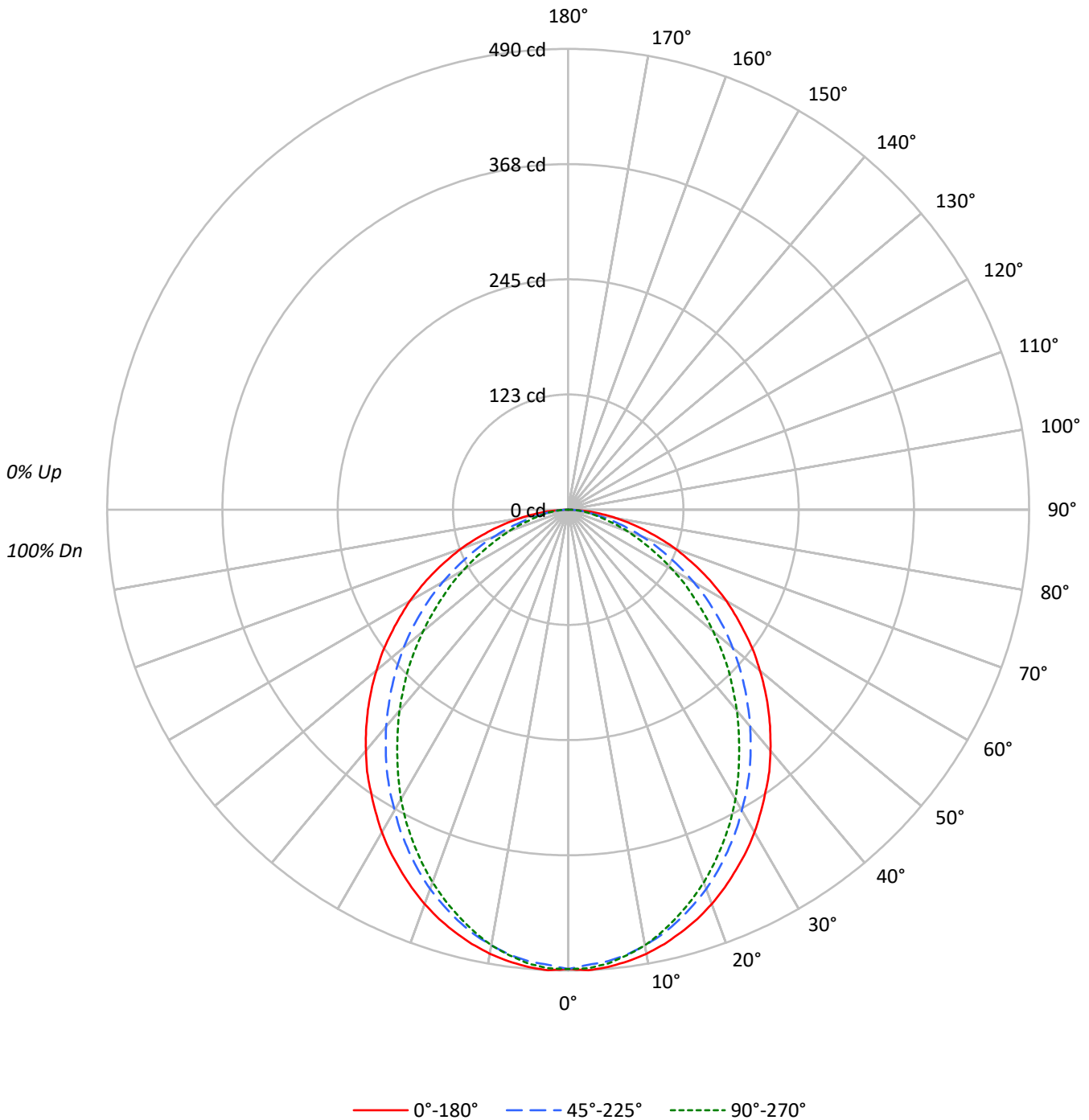
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1151.7 lumens  
Efficiency: N/A  
Efficacy: 102.8 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29

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

	0°	45°	90°
0°	4341	4341	4341
5°	4354	4300	4322
10°	4327	4246	4246
15°	4279	4163	4123
20°	4221	4061	3989
25°	4143	3931	3825
30°	4066	3788	3648
35°	3969	3649	3438
40°	3881	3493	3237
45°	3784	3326	3027
50°	3678	3156	2781
55°	3564	2960	2535
60°	3454	2736	2281
65°	3306	2471	1994
70°	3147	2183	1733
75°	2909	1820	1412
80°	2657	1423	1290
85°	2356	1356	1285

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3784 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.9	4.0
10°-20°	128.3	11.1
20°-30°	186.0	16.2
30°-40°	212.0	18.4
40°-50°	206.3	17.9
50°-60°	173.3	15.0
60°-70°	120.7	10.5
70°-80°	62.3	5.4
80°-90°	16.8	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°	360.2	31.3
0°-40°	572.2	49.7
0°-60°	951.8	82.6
0°-90°	1151.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1151.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	488	488	488	488	488	
5°	488	487	482	486	484	46
15°	465	461	452	452	448	131
25°	422	414	401	395	390	195
35°	366	355	336	324	317	229
45°	301	287	265	248	241	232
55°	230	215	191	172	164	206
65°	157	142	118	101	95	156
75°	85	72	53	44	41	90
85°	23	15	13	13	13	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	488.4	488.4	488.4	488.4	488.4
2.5°	490.2	488.8	484.4	488.4	488.0
5°	488.0	486.6	481.9	485.5	484.4
7.5°	484.4	482.6	477.2	479.7	477.9
10°	479.4	477.6	470.4	472.2	470.4
12.5°	472.9	470.4	462.4	462.8	459.9
15°	465.0	461.4	452.4	451.6	448.0
17.5°	456.3	451.6	441.2	439.4	435.4
20°	446.2	440.5	429.3	425.3	421.7
22.5°	434.7	427.8	415.6	410.9	406.2
25°	422.4	414.5	400.8	395.0	390.0
27.5°	409.8	400.5	385.7	378.5	373.4
30°	396.1	385.3	369.1	360.8	355.4
32.5°	381.0	370.2	353.2	343.1	336.3
35°	365.8	354.7	336.3	323.7	316.8
37.5°	351.1	338.5	318.6	305.7	297.7
40°	334.5	321.2	301.0	286.2	279.0
42.5°	317.9	304.2	282.6	267.1	259.2
45°	301.0	286.6	264.6	247.6	240.8
47.5°	283.7	269.2	246.5	228.9	221.0
50°	266.0	251.6	228.2	208.7	201.1
52.5°	248.7	233.6	210.1	190.3	182.4
55°	230.0	215.2	191.0	171.6	163.6
57.5°	211.9	196.4	173.0	153.2	146.7
60°	194.3	178.8	153.9	134.8	128.3
62.5°	175.5	160.0	135.5	117.1	111.4
65°	157.2	142.0	117.5	100.6	94.8
67.5°	138.4	124.7	100.9	84.7	80.0
70°	121.1	105.6	84.0	69.9	66.7
72.5°	102.7	89.0	68.1	56.6	54.1
75°	84.7	71.7	53.0	44.3	41.1
77.5°	68.1	55.5	40.0	32.8	32.8
80°	51.9	40.7	27.8	26.0	25.2
82.5°	36.8	26.3	20.5	19.1	18.7
85°	23.1	14.8	13.3	12.6	12.6
87.5°	11.2	6.8	6.8	6.5	6.5
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	16.55	18.13	16.92	18.44	18.75	14.66	16.23	15.02	16.54	16.86
	3H	18.37	19.79	18.74	20.11	20.47	15.92	17.34	16.30	17.66	18.03
	4H	19.05	20.38	19.45	20.73	21.11	16.31	17.65	16.71	18.00	18.37
	6H	19.56	20.80	19.98	21.16	21.55	16.59	17.83	17.00	18.19	18.58
	8H	19.73	20.91	20.16	21.30	21.70	16.69	17.87	17.12	18.26	18.66
	12H	19.85	20.98	20.28	21.36	21.79	16.77	17.90	17.20	18.28	18.71
4H	2H	16.90	18.24	17.30	18.58	18.96	15.36	16.69	15.76	17.04	17.42
	3H	18.92	20.03	19.33	20.43	20.83	16.81	17.92	17.22	18.32	18.72
	4H	19.73	20.73	20.16	21.15	21.59	17.29	18.29	17.72	18.70	19.14
	6H	20.37	21.25	20.83	21.69	22.15	17.65	18.53	18.11	18.97	19.43
	8H	20.59	21.41	21.05	21.85	22.32	17.79	18.61	18.25	19.05	19.51
	12H	20.76	21.49	21.24	21.96	22.44	17.91	18.64	18.39	19.11	19.58
8H	4H	19.84	20.65	20.30	21.10	21.56	17.62	18.44	18.08	18.88	19.35
	6H	20.56	21.24	21.06	21.73	22.20	18.07	18.75	18.57	19.24	19.71
	8H	20.84	21.44	21.35	21.95	22.44	18.26	18.87	18.78	19.38	19.87
	12H	21.06	21.60	21.57	22.09	22.66	18.45	18.98	18.96	19.48	20.04
12H	4H	19.83	20.56	20.31	21.04	21.51	17.66	18.40	18.15	18.87	19.34
	6H	20.56	21.16	21.07	21.67	22.16	18.13	18.74	18.64	19.25	19.74
	8H	20.87	21.41	21.38	21.90	22.46	18.38	18.92	18.89	19.41	19.97