

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P624650

Luminaire Tested: S930DIP-W127-X4-USTD-W

Issue Date: 11/3/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P624650  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35539-R2)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/3/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S930DIP-W127-X4-USTD-W  
Description: NEO-RAY COVERA DIRECT/INDIRECT 4-FOOT LED WaveStream LUMINAIRE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

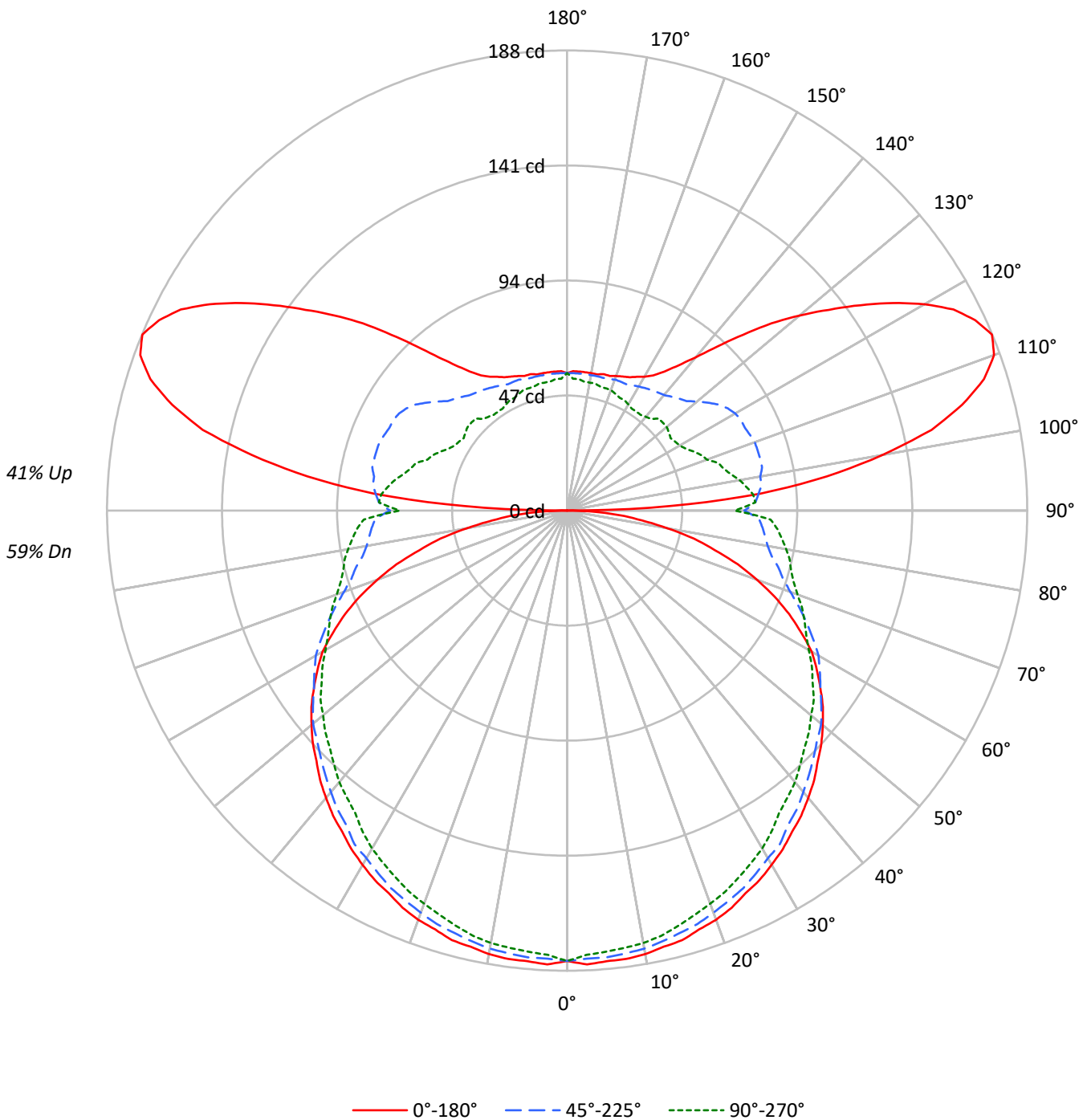
Lumens per Lamp: N/A  
Luminaire Lumens: 1246.2 lumens  
Efficiency: N/A  
Efficacy: 84.8 lumens/watt  
Spacing Criteria (0/90/45): 1.35 / 1.29 / 1.48  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 3.83' x H: 0.17')  
CIE Type: General Diffuse

Input Watts (W): 14.7  
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				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	0
RCR																					
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59			
1	97	92	87	82	90	85	81	77	73	70	67	63	60	58	53	51	49	44			
2	87	78	71	65	81	73	67	61	63	58	53	54	50	46	45	42	39	35			
3	79	68	60	53	73	63	56	50	55	49	44	46	42	38	39	35	32	28			
4	72	60	51	44	66	56	48	42	48	42	37	41	36	32	34	30	27	24			
5	66	53	44	37	61	49	41	35	43	36	31	36	31	27	31	27	23	20			
6	61	47	38	32	56	44	36	30	38	32	27	33	28	23	28	23	20	17			
7	56	43	34	28	52	40	32	26	35	28	23	30	24	21	25	21	18	15			
8	52	39	30	24	48	36	29	23	31	25	21	27	22	18	23	19	16	13			
9	48	35	27	22	45	33	26	21	29	23	18	25	20	16	21	17	14	12			
10	45	32	25	19	42	30	23	18	26	21	16	23	18	15	20	16	13	11			

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

	0°	45°	90°
0°	775	775	775
5°	778	761	748
10°	781	750	735
15°	783	738	718
20°	785	728	702
25°	786	721	689
30°	793	712	677
35°	799	705	660
40°	813	703	658
45°	827	702	653
50°	849	712	657
55°	873	715	662
60°	905	735	670
65°	913	743	694
70°	906	761	731
75°	874	819	797
80°	809	927	912
85°	697	1148	1080

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 90°  
 Luminance: 1935 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	17.5	1.4
10°-20°	50.6	4.1
20°-30°	78.5	6.3
30°-40°	98.4	7.9
40°-50°	109.8	8.8
50°-60°	112.7	9.0
60°-70°	104.9	8.4
70°-80°	89.4	7.2
80°-90°	75.0	6.0
90°-100°	85.7	6.9
100°-110°	105.0	8.4
110°-120°	99.4	8.0
120°-130°	78.4	6.3
130°-140°	55.3	4.4
140°-150°	37.9	3.0
150°-160°	26.3	2.1
160°-170°	15.9	1.3
170°-180°	5.3	0.4
0°-30°	146.6	11.8
0°-40°	245.0	19.7
0°-60°	467.6	37.5
0°-90°	737.0	59.1
90°-120°	290.1	23.3
90°-150°	461.7	37.0
90°-180°	509.0	40.8
0°-180°	1246.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	184	184	184	184	184	
5°	185	185	183	183	181	18
15°	182	181	179	179	176	51
25°	172	172	170	169	166	80
35°	160	159	157	156	151	101
45°	145	143	142	142	137	112
55°	126	125	126	128	122	113
65°	100	102	108	109	107	99
75°	62	73	89	96	95	66
85°	22	55	80	86	86	21
90°	0	62	72	72	68	7
95°	79	86	78	78	76	74
105°	167	132	82	70	66	173
115°	184	139	80	62	57	180
125°	146	116	76	58	52	132
135°	102	86	65	56	53	80
145°	69	66	60	54	49	44
155°	60	59	57	55	51	28
165°	58	57	56	55	52	16
175°	57	57	56	56	54	5
180°	56	56	56	56	56	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	184.0	184.0	184.0	184.0	184.0
2.5°	185.6	184.8	183.2	184.0	181.7
5°	184.8	184.8	183.2	183.2	180.9
7.5°	184.8	184.0	182.5	182.5	180.2
10°	184.0	183.2	181.7	181.7	179.4
12.5°	182.5	182.5	180.2	180.2	177.9
15°	181.7	180.9	178.6	178.6	175.6
17.5°	179.4	178.6	177.1	176.3	173.2
20°	177.9	177.1	174.8	174.0	170.9
22.5°	175.6	174.8	172.5	171.7	168.6
25°	172.5	171.7	170.2	169.4	165.5
27.5°	170.2	169.4	167.1	166.3	162.5
30°	167.1	166.3	164.0	162.5	159.4
32.5°	164.0	162.5	161.7	159.4	155.5
35°	160.2	158.6	157.1	155.5	150.9
37.5°	157.1	155.5	154.0	152.5	147.8
40°	153.2	150.9	150.1	148.6	144.8
42.5°	149.4	147.1	146.3	145.5	140.9
45°	144.8	143.2	142.4	141.7	137.1
47.5°	140.9	138.6	138.6	137.8	134.0
50°	136.3	134.0	135.5	134.7	130.1
52.5°	131.7	130.1	130.9	131.7	127.0
55°	126.3	124.7	126.3	127.8	122.4
57.5°	120.9	120.1	122.4	123.2	118.6
60°	115.5	114.7	118.6	118.6	114.0
62.5°	107.8	108.6	113.2	114.0	110.1
65°	100.1	102.4	107.8	109.3	107.0
67.5°	91.6	96.2	102.4	106.3	103.9
70°	82.4	89.3	97.0	102.4	100.1
72.5°	73.1	81.6	92.4	99.3	97.0
75°	62.4	73.1	89.3	96.2	94.7
77.5°	53.1	65.4	85.5	93.9	93.2
80°	41.6	59.3	83.2	91.6	90.9
82.5°	30.8	55.4	81.6	89.3	88.5
85°	21.6	55.4	80.1	86.2	86.2
87.5°	11.5	58.5	78.5	83.9	83.2
90°	0.0	62.4	72.4	71.6	68.5
92.5°	42.3	73.9	77.0	77.8	77.0
95°	79.3	86.2	78.5	77.8	76.2
97.5°	107.0	98.6	80.1	75.5	73.9
100°	130.9	111.6	80.1	73.9	71.6
102.5°	152.5	122.4	81.6	71.6	68.5
105°	167.1	132.4	81.6	70.1	66.2
107.5°	178.6	139.4	81.6	68.5	64.7
110°	185.6	142.4	81.6	67.0	60.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	187.9	142.4	80.8	63.9	59.3
115°	184.0	139.4	80.1	61.6	57.0
117.5°	177.9	135.5	80.1	60.1	54.7
120°	168.6	130.1	79.3	59.3	53.1
122.5°	157.8	123.2	77.8	58.5	52.4
125°	146.3	116.3	75.5	58.5	51.6
127.5°	134.7	108.6	72.4	59.3	52.4
130°	124.0	100.9	69.3	59.3	53.1
132.5°	113.2	93.2	66.2	58.5	53.1
135°	101.6	85.5	64.7	56.2	53.1
137.5°	90.9	78.5	63.1	54.7	50.8
140°	81.6	73.9	61.6	53.9	50.0
142.5°	74.7	70.1	60.8	53.1	49.3
145°	69.3	66.2	60.1	53.9	49.3
147.5°	65.4	63.9	59.3	53.9	49.3
150°	63.1	62.4	58.5	53.9	50.0
152.5°	61.6	60.8	57.7	54.7	50.8
155°	60.1	59.3	57.0	54.7	50.8
157.5°	59.3	58.5	57.0	54.7	51.6
160°	58.5	57.7	57.0	54.7	52.4
162.5°	57.7	57.7	56.2	55.4	52.4
165°	57.7	57.0	56.2	55.4	52.4
167.5°	57.0	57.0	56.2	55.4	53.1
170°	57.0	57.0	56.2	55.4	53.1
172.5°	57.0	57.0	56.2	55.4	53.1
175°	57.0	57.0	56.2	56.2	53.9
177.5°	57.0	57.0	56.2	56.2	53.9
180°	56.2	56.2	56.2	56.2	56.2



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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	7.68	8.72	8.54	9.62	10.74	8.34	9.38	9.19	10.27	11.40
	3H	9.78	10.73	10.65	11.63	12.78	11.11	12.06	11.98	12.96	14.11
	4H	10.56	11.47	11.45	12.38	13.54	12.56	13.47	13.45	14.38	15.54
	6H	11.14	11.98	12.04	12.89	14.07	14.19	15.03	15.08	15.94	17.12
	8H	11.33	12.13	12.23	13.07	14.24	15.05	15.86	15.96	16.79	17.97
	12H	11.45	12.22	12.36	13.14	14.35	16.00	16.78	16.91	17.70	18.90
4H	2H	8.51	9.42	9.40	10.33	11.49	9.00	9.91	9.89	10.81	11.97
	3H	10.86	11.63	11.76	12.57	13.75	12.00	12.78	12.90	13.72	14.89
	4H	11.82	12.54	12.73	13.47	14.67	13.63	14.35	14.54	15.28	16.48
	6H	12.57	13.20	13.49	14.16	15.36	15.45	16.08	16.37	17.03	18.23
	8H	12.85	13.45	13.77	14.40	15.61	16.42	17.01	17.34	17.96	19.18
	12H	13.05	13.59	13.99	14.56	15.78	17.48	18.03	18.43	18.99	20.22
8H	4H	12.54	13.13	13.46	14.08	15.30	14.04	14.63	14.96	15.58	16.80
	6H	13.57	14.08	14.52	15.07	16.28	16.08	16.59	17.03	17.57	18.79
	8H	14.03	14.48	14.98	15.46	16.69	17.22	17.68	18.18	18.65	19.89
	12H	14.40	14.81	15.36	15.78	17.06	18.49	18.89	19.45	19.87	21.14
12H	4H	12.75	13.29	13.69	14.26	15.48	14.08	14.62	15.02	15.59	16.81
	6H	13.94	14.40	14.90	15.38	16.61	16.21	16.66	17.16	17.64	18.87
	8H	14.53	14.93	15.49	15.91	17.18	17.43	17.84	18.40	18.81	20.09