

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: P624691

Luminaire Tested: S930DIP-W340-X2-U5LT-W

Issue Date: 11/3/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P624691  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35531-R2)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/3/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S930DIP-W340-X2-U5LT-W  
Description: NEO-RAY COVERA DIRECT/INDIRECT 2-FOOT LED WaveStream LUMINAIRE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

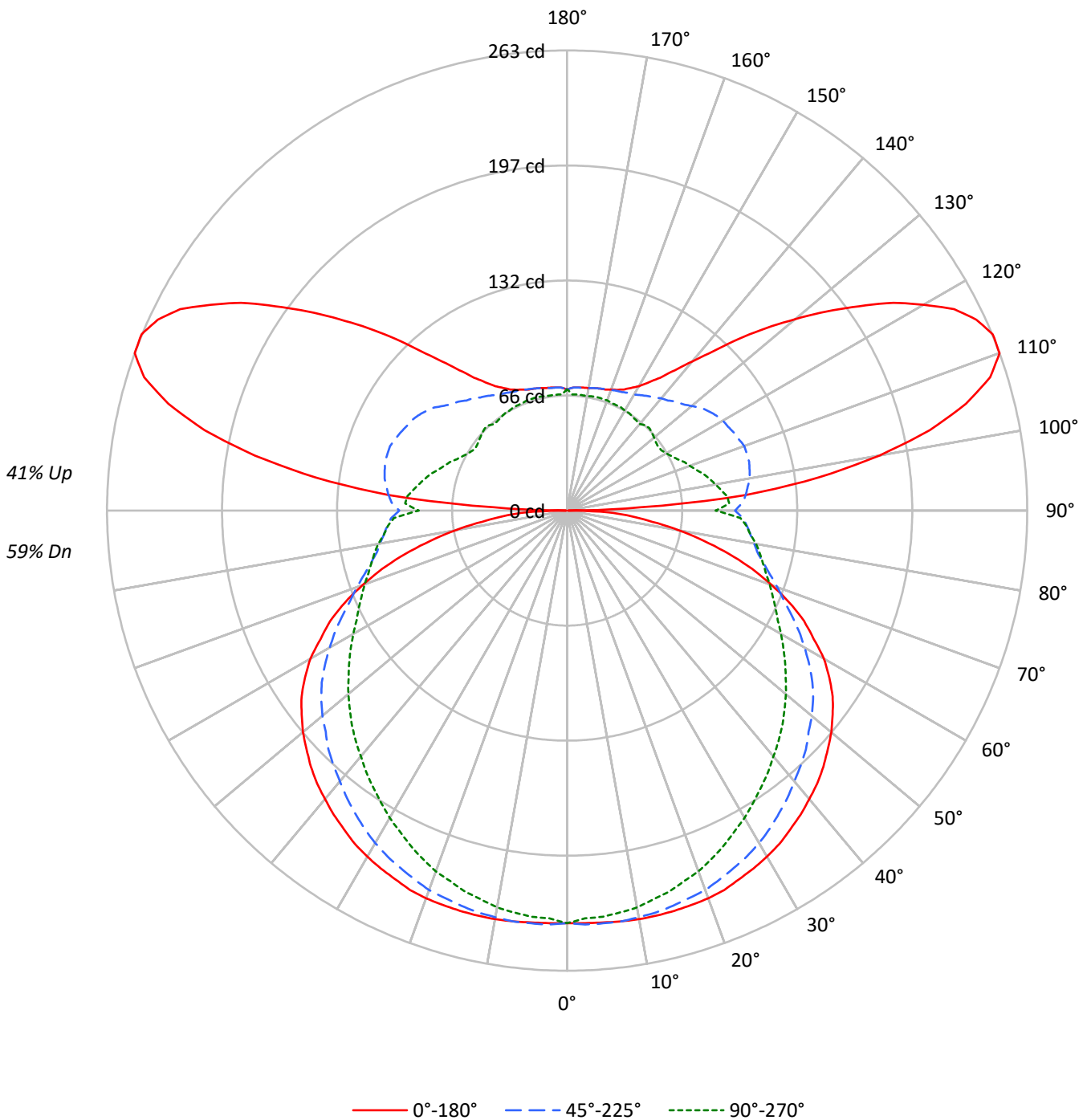
Lumens per Lamp: N/A  
Luminaire Lumens: 1657.7 lumens  
Efficiency: N/A  
Efficacy: 103.0 lumens/watt  
Spacing Criteria (0/90/45): 1.44 / 1.28 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1.92' x H: 0.17')  
CIE Type: General Diffuse

Input Watts (W): 16.1  
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									
RC	80									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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59																			
1	97	92	87	82	90	85	81	77	74	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	26	23	20																			
6	61	47	38	32	56	44	36	30	38	32	27	33	27	23	28	23	20	17																			
7	56	43	34	28	52	40	32	26	35	28	23	30	24	20	25	21	18	15																			
8	52	38	30	24	48	36	28	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	24	19	42	30	23	18	26	20	16	23	18	15	20	16	13	11																			

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

	0°	45°	90°
0°	1986	1986	1986
5°	1983	1962	1928
10°	1997	1937	1887
15°	2018	1917	1842
20°	2049	1904	1803
25°	2077	1886	1761
30°	2115	1876	1724
35°	2156	1861	1691
40°	2207	1851	1667
45°	2270	1857	1657
50°	2341	1864	1649
55°	2421	1876	1646
60°	2482	1869	1660
65°	2510	1867	1705
70°	2471	1902	1799
75°	2357	2000	1950
80°	2109	2239	2199
85°	1784	2682	2581

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 90°  
 Luminance: 4255 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.5	1.4
10°-20°	65.9	4.0
20°-30°	103.5	6.2
30°-40°	131.6	7.9
40°-50°	148.2	8.9
50°-60°	151.8	9.2
60°-70°	140.4	8.5
70°-80°	117.9	7.1
80°-90°	97.4	5.9
90°-100°	112.2	6.8
100°-110°	141.1	8.5
110°-120°	134.2	8.1
120°-130°	105.0	6.3
130°-140°	74.1	4.5
140°-150°	50.6	3.1
150°-160°	34.2	2.1
160°-170°	20.2	1.2
170°-180°	6.7	0.4
0°-30°	191.9	11.6
0°-40°	323.5	19.5
0°-60°	623.6	37.6
0°-90°	979.3	59.1
90°-120°	387.5	23.4
90°-150°	617.3	37.2
90°-180°	678.0	40.9
0°-180°	1657.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	236	236	236	236	236	
5°	236	237	237	237	233	23
15°	237	236	234	231	225	67
25°	232	231	225	219	212	107
35°	222	219	211	202	193	139
45°	207	201	193	183	174	160
55°	185	178	171	161	152	165
65°	149	147	142	138	131	147
75°	96	103	116	120	116	101
85°	37	79	103	105	103	35
90°	0	89	96	89	85	9
95°	103	124	102	95	92	98
105°	236	186	108	87	81	244
115°	258	197	105	78	70	253
125°	204	162	99	73	64	183
135°	139	117	88	74	66	108
145°	93	89	80	72	65	60
155°	76	76	75	72	66	36
165°	72	72	72	71	67	20
175°	71	71	71	70	66	7
180°	69	69	69	69	69	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	235.8	235.8	235.8	235.8	235.8
2.5°	236.0	236.3	236.8	236.8	233.3
5°	236.3	236.6	236.8	236.6	233.0
7.5°	236.8	236.6	236.8	235.8	231.7
10°	237.1	236.8	236.0	234.7	230.3
12.5°	237.1	236.6	235.2	232.5	227.6
15°	236.8	236.0	233.8	230.6	225.4
17.5°	236.3	235.5	232.2	227.8	222.1
20°	235.8	234.4	230.8	225.7	219.4
22.5°	234.7	232.5	228.1	222.4	215.6
25°	232.5	230.6	225.4	218.6	211.5
27.5°	230.6	228.1	222.7	214.8	206.9
30°	228.4	225.4	219.4	210.7	202.8
32.5°	225.9	222.4	215.6	206.6	197.9
35°	222.4	218.6	211.2	202.2	193.2
37.5°	219.1	215.0	206.9	197.6	188.6
40°	215.3	210.7	202.0	192.4	183.4
42.5°	211.5	206.3	197.6	188.3	178.8
45°	207.1	201.1	193.0	183.2	173.9
47.5°	202.0	196.0	187.2	178.0	168.4
50°	197.1	191.1	182.6	172.5	163.3
52.5°	191.3	185.1	177.2	166.8	157.5
55°	185.3	178.2	171.2	161.3	152.1
57.5°	177.7	171.7	164.1	155.1	146.6
60°	169.5	163.8	156.7	149.1	141.2
62.5°	158.9	155.6	149.4	143.4	135.7
65°	149.4	147.2	141.5	137.9	131.4
67.5°	137.6	138.2	134.1	132.7	127.0
70°	124.3	127.6	127.8	128.1	123.2
72.5°	110.9	115.6	121.6	123.2	119.1
75°	95.9	103.0	116.1	119.6	115.8
77.5°	80.1	91.3	111.5	116.4	112.8
80°	64.9	83.1	108.5	112.8	109.6
82.5°	49.1	79.0	105.7	108.7	105.7
85°	36.8	79.3	103.3	105.2	103.0
87.5°	23.7	82.9	100.8	101.4	99.2
90°	0.5	88.9	95.9	89.1	84.8
92.5°	42.0	105.7	100.3	95.4	92.7
95°	102.8	124.0	102.5	94.6	91.8
97.5°	145.0	142.8	104.1	92.7	88.9
100°	181.2	159.2	106.0	91.0	86.1
102.5°	212.3	174.2	106.8	88.9	83.4
105°	236.0	186.4	107.7	86.7	80.7
107.5°	253.5	195.4	107.7	84.5	77.4
110°	263.0	201.1	107.7	82.3	74.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	263.3	201.1	106.3	79.6	72.5
115°	258.1	197.1	105.2	77.9	69.5
117.5°	249.4	190.5	103.8	75.5	67.3
120°	235.2	182.3	102.8	74.1	65.4
122.5°	221.0	172.2	101.1	73.6	64.0
125°	203.6	161.6	98.9	73.3	63.5
127.5°	187.0	150.4	96.5	73.6	64.0
130°	170.1	139.3	92.9	74.4	64.9
132.5°	154.3	127.0	89.9	74.7	65.7
135°	138.7	116.9	88.0	74.1	66.5
137.5°	123.2	107.7	85.3	72.5	66.2
140°	111.2	100.0	83.7	72.0	64.6
142.5°	101.1	93.5	81.5	72.2	64.9
145°	92.7	88.6	79.9	72.2	65.4
147.5°	86.9	84.5	78.2	72.2	66.0
150°	82.0	80.9	76.6	72.0	66.0
152.5°	79.0	78.5	75.8	72.0	66.5
155°	76.3	76.3	74.7	71.7	66.5
157.5°	74.7	74.7	74.1	71.4	66.5
160°	73.6	73.9	73.3	71.4	67.0
162.5°	72.5	72.8	72.8	71.1	67.0
165°	72.2	72.2	72.2	70.9	67.0
167.5°	71.7	71.7	71.7	70.6	66.8
170°	71.1	71.1	71.1	70.3	66.5
172.5°	70.9	70.6	70.6	70.0	66.5
175°	70.6	70.6	70.6	70.0	66.5
177.5°	70.3	70.3	70.3	69.8	66.5
180°	69.2	69.2	69.2	69.2	69.2



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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	11.54	12.58	12.39	13.47	14.60	11.17	12.22	12.03	13.11	14.24
	3H	13.72	14.67	14.59	15.57	16.72	13.83	14.78	14.70	15.68	16.83
	4H	14.54	15.45	15.43	16.36	17.52	15.20	16.10	16.08	17.01	18.17
	6H	15.16	16.01	16.06	16.92	18.10	16.68	17.52	17.58	18.43	19.61
	8H	15.38	16.18	16.28	17.12	18.29	17.45	18.26	18.35	19.19	20.36
	12H	15.53	16.30	16.44	17.23	18.43	18.27	19.04	19.18	19.97	21.17
4H	2H	12.19	13.10	13.08	14.00	15.16	11.92	12.82	12.81	13.73	14.89
	3H	14.63	15.40	15.53	16.34	17.52	14.79	15.57	15.69	16.50	17.68
	4H	15.63	16.34	16.53	17.27	18.48	16.32	17.04	17.23	17.97	19.17
	6H	16.43	17.06	17.35	18.01	19.21	17.99	18.62	18.91	19.57	20.77
	8H	16.74	17.33	17.66	18.28	19.50	18.86	19.45	19.78	20.40	21.62
	12H	16.97	17.52	17.92	18.48	19.71	19.78	20.32	20.73	21.29	22.52
8H	4H	16.19	16.78	17.11	17.73	18.95	16.78	17.37	17.71	18.32	19.54
	6H	17.25	17.75	18.20	18.74	19.96	18.67	19.18	19.62	20.17	21.38
	8H	17.73	18.19	18.69	19.17	20.40	19.71	20.16	20.67	21.14	22.37
	12H	18.16	18.56	19.12	19.53	20.81	20.83	21.23	21.79	22.21	23.48
12H	4H	16.33	16.88	17.28	17.84	19.07	16.84	17.38	17.78	18.35	19.57
	6H	17.53	17.99	18.49	18.97	20.20	18.82	19.27	19.78	20.25	21.48
	8H	18.14	18.54	19.10	19.52	20.79	19.94	20.35	20.91	21.32	22.60