

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: P624661

Luminaire Tested: S930DIP-W140-X4-U5LT-W

Issue Date: 11/3/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P624661  
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-W140-X4-U5LT-W  
Description: NEO-RAY COVERA DIRECT/INDIRECT 4-FOOT LED WaveStream LUMINAIRE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

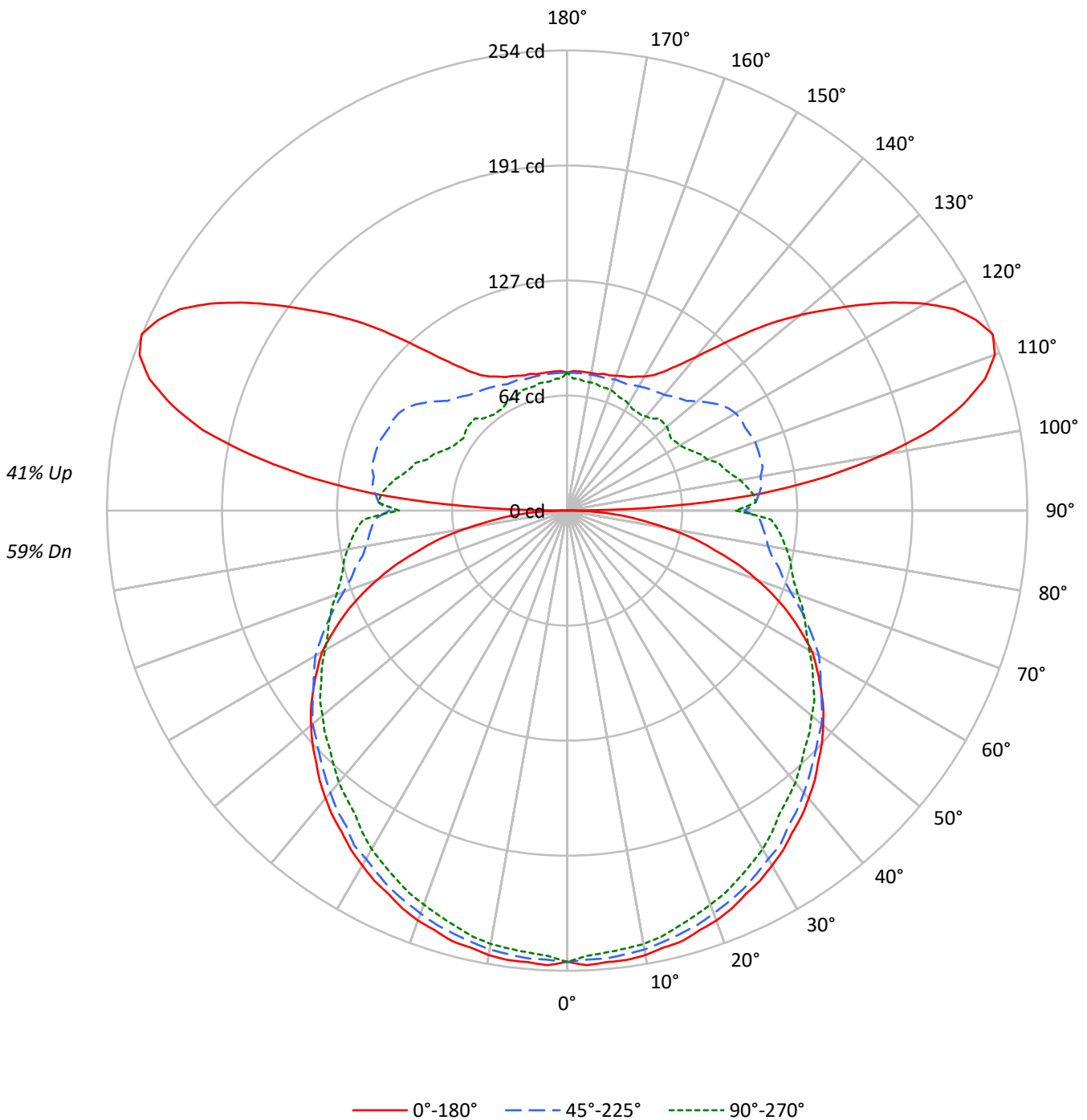
Lumens per Lamp: N/A  
Luminaire Lumens: 1687.0 lumens  
Efficiency: N/A  
Efficacy: 110.3 lumens/watt  
Spacing Criteria (0/90/45): 1.35 / 1.29 / 1.48  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 3.83' x H: 0.17')  
CIE Type: General Diffuse

Input Watts (W): 15.3  
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	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°	1049	1049	1049
5°	1054	1030	1013
10°	1057	1015	995
15°	1060	999	971
20°	1063	986	951
25°	1064	976	933
30°	1073	964	917
35°	1082	954	894
40°	1100	952	891
45°	1119	951	884
50°	1149	963	890
55°	1182	968	897
60°	1224	995	907
65°	1235	1006	940
70°	1227	1030	989
75°	1182	1109	1079
80°	1095	1255	1234
85°	943	1554	1462

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 90°  
 Luminance: 2617 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.7	1.4
10°-20°	68.5	4.1
20°-30°	106.3	6.3
30°-40°	133.3	7.9
40°-50°	148.7	8.8
50°-60°	152.6	9.0
60°-70°	142.1	8.4
70°-80°	121.1	7.2
80°-90°	101.6	6.0
90°-100°	116.0	6.9
100°-110°	142.1	8.4
110°-120°	134.5	8.0
120°-130°	106.2	6.3
130°-140°	74.8	4.4
140°-150°	51.3	3.0
150°-160°	35.6	2.1
160°-170°	21.5	1.3
170°-180°	7.2	0.4
0°-30°	198.4	11.8
0°-40°	331.7	19.7
0°-60°	632.9	37.5
0°-90°	997.6	59.1
90°-120°	392.7	23.3
90°-150°	625.0	37.0
90°-180°	689.0	40.8
0°-180°	1687.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	249	249	249	249	249	
5°	250	250	248	248	245	24
15°	246	245	242	242	238	69
25°	234	232	230	229	224	108
35°	217	215	213	210	204	136
45°	196	194	193	192	186	152
55°	171	169	171	173	166	153
65°	136	139	146	148	145	134
75°	84	99	121	130	128	89
85°	29	75	108	117	117	29
90°	0	84	98	97	93	10
95°	107	117	106	105	103	101
105°	226	179	110	95	90	235
115°	249	189	108	83	77	244
125°	198	157	102	79	70	178
135°	138	116	88	76	72	108
145°	94	90	81	73	67	60
155°	81	80	77	74	69	38
165°	78	77	76	75	71	22
175°	77	77	76	76	73	7
180°	76	76	76	76	76	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	249.1	249.1	249.1	249.1	249.1
2.5°	251.2	250.2	248.1	249.1	246.0
5°	250.2	250.2	248.1	248.1	244.9
7.5°	250.2	249.1	247.0	247.0	243.9
10°	249.1	248.1	246.0	246.0	242.9
12.5°	247.0	247.0	243.9	243.9	240.8
15°	246.0	244.9	241.8	241.8	237.6
17.5°	242.9	241.8	239.7	238.7	234.5
20°	240.8	239.7	236.6	235.6	231.4
22.5°	237.6	236.6	233.5	232.4	228.3
25°	233.5	232.4	230.4	229.3	224.1
27.5°	230.4	229.3	226.2	225.1	219.9
30°	226.2	225.1	222.0	219.9	215.8
32.5°	222.0	219.9	218.9	215.8	210.5
35°	216.8	214.7	212.6	210.5	204.3
37.5°	212.6	210.5	208.5	206.4	200.1
40°	207.4	204.3	203.3	201.2	196.0
42.5°	202.2	199.1	198.0	197.0	190.7
45°	196.0	193.9	192.8	191.8	185.5
47.5°	190.7	187.6	187.6	186.6	181.4
50°	184.5	181.4	183.4	182.4	176.2
52.5°	178.2	176.2	177.2	178.2	172.0
55°	170.9	168.9	170.9	173.0	165.7
57.5°	163.6	162.6	165.7	166.8	160.5
60°	156.3	155.3	160.5	160.5	154.3
62.5°	145.9	147.0	153.2	154.3	149.1
65°	135.5	138.6	145.9	148.0	144.9
67.5°	124.0	130.3	138.6	143.8	140.7
70°	111.5	120.9	131.3	138.6	135.5
72.5°	99.0	110.5	125.1	134.5	131.3
75°	84.4	99.0	120.9	130.3	128.2
77.5°	71.9	88.6	115.7	127.2	126.1
80°	56.3	80.3	112.6	124.0	123.0
82.5°	41.7	75.0	110.5	120.9	119.9
85°	29.2	75.0	108.4	116.7	116.7
87.5°	15.6	79.2	106.3	113.6	112.6
90°	0.0	84.4	98.0	96.9	92.8
92.5°	57.3	100.1	104.2	105.3	104.2
95°	107.4	116.7	106.3	105.3	103.2
97.5°	144.9	133.4	108.4	102.1	100.1
100°	177.2	151.1	108.4	100.1	96.9
102.5°	206.4	165.7	110.5	96.9	92.8
105°	226.2	179.3	110.5	94.9	89.6
107.5°	241.8	188.7	110.5	92.8	87.6
110°	251.2	192.8	110.5	90.7	82.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	254.3	192.8	109.4	86.5	80.3
115°	249.1	188.7	108.4	83.4	77.1
117.5°	240.8	183.4	108.4	81.3	74.0
120°	228.3	176.2	107.4	80.3	71.9
122.5°	213.7	166.8	105.3	79.2	70.9
125°	198.0	157.4	102.1	79.2	69.8
127.5°	182.4	147.0	98.0	80.3	70.9
130°	167.8	136.5	93.8	80.3	71.9
132.5°	153.2	126.1	89.6	79.2	71.9
135°	137.6	115.7	87.6	76.1	71.9
137.5°	123.0	106.3	85.5	74.0	68.8
140°	110.5	100.1	83.4	73.0	67.8
142.5°	101.1	94.9	82.3	71.9	66.7
145°	93.8	89.6	81.3	73.0	66.7
147.5°	88.6	86.5	80.3	73.0	66.7
150°	85.5	84.4	79.2	73.0	67.8
152.5°	83.4	82.3	78.2	74.0	68.8
155°	81.3	80.3	77.1	74.0	68.8
157.5°	80.3	79.2	77.1	74.0	69.8
160°	79.2	78.2	77.1	74.0	70.9
162.5°	78.2	78.2	76.1	75.0	70.9
165°	78.2	77.1	76.1	75.0	70.9
167.5°	77.1	77.1	76.1	75.0	71.9
170°	77.1	77.1	76.1	75.0	71.9
172.5°	77.1	77.1	76.1	75.0	71.9
175°	77.1	77.1	76.1	76.1	73.0
177.5°	77.1	77.1	76.1	76.1	73.0
180°	76.1	76.1	76.1	76.1	76.1



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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	8.74	9.78	9.59	10.67	11.80	9.39	10.43	10.24	11.32	12.45
	3H	10.83	11.78	11.70	12.68	13.83	12.16	13.11	13.03	14.01	15.16
	4H	11.62	12.52	12.50	13.43	14.59	13.62	14.52	14.50	15.43	16.59
	6H	12.19	13.03	13.09	13.95	15.12	15.24	16.08	16.13	16.99	18.17
	8H	12.38	13.19	13.28	14.12	15.29	16.11	16.91	17.01	17.84	19.02
	12H	12.50	13.27	13.41	14.20	15.40	17.06	17.83	17.97	18.75	19.96
4H	2H	9.57	10.47	10.45	11.38	12.54	10.05	10.96	10.94	11.86	13.02
	3H	11.91	12.69	12.81	13.62	14.80	13.06	13.83	13.95	14.77	15.95
	4H	12.87	13.59	13.78	14.52	15.72	14.68	15.40	15.59	16.33	17.53
	6H	13.62	14.26	14.55	15.21	16.41	16.50	17.13	17.42	18.08	19.28
	8H	13.90	14.50	14.83	15.45	16.66	17.47	18.07	18.40	19.02	20.23
	12H	14.10	14.64	15.04	15.61	16.83	18.54	19.08	19.48	20.05	21.27
8H	4H	13.59	14.19	14.52	15.14	16.35	15.09	15.68	16.01	16.63	17.85
	6H	14.62	15.13	15.57	16.12	17.33	17.13	17.64	18.08	18.63	19.84
	8H	15.08	15.53	16.04	16.51	17.74	18.27	18.73	19.23	19.71	20.94
	12H	15.45	15.86	16.42	16.83	18.11	19.54	19.95	20.50	20.92	22.20
12H	4H	13.80	14.34	14.74	15.31	16.53	15.13	15.67	16.07	16.64	17.86
	6H	14.99	15.45	15.95	16.43	17.66	17.26	17.71	18.21	18.69	19.92
	8H	15.58	15.99	16.54	16.96	18.24	18.48	18.89	19.45	19.86	21.14