

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: P624688

Luminaire Tested: S930DIP-W335-X2-USTD-W

Issue Date: 11/3/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P624688  
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-W335-X2-USTD-W  
Description: NEO-RAY COVERA DIRECT/INDIRECT 2-FOOT LED WaveStream LUMINAIRE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

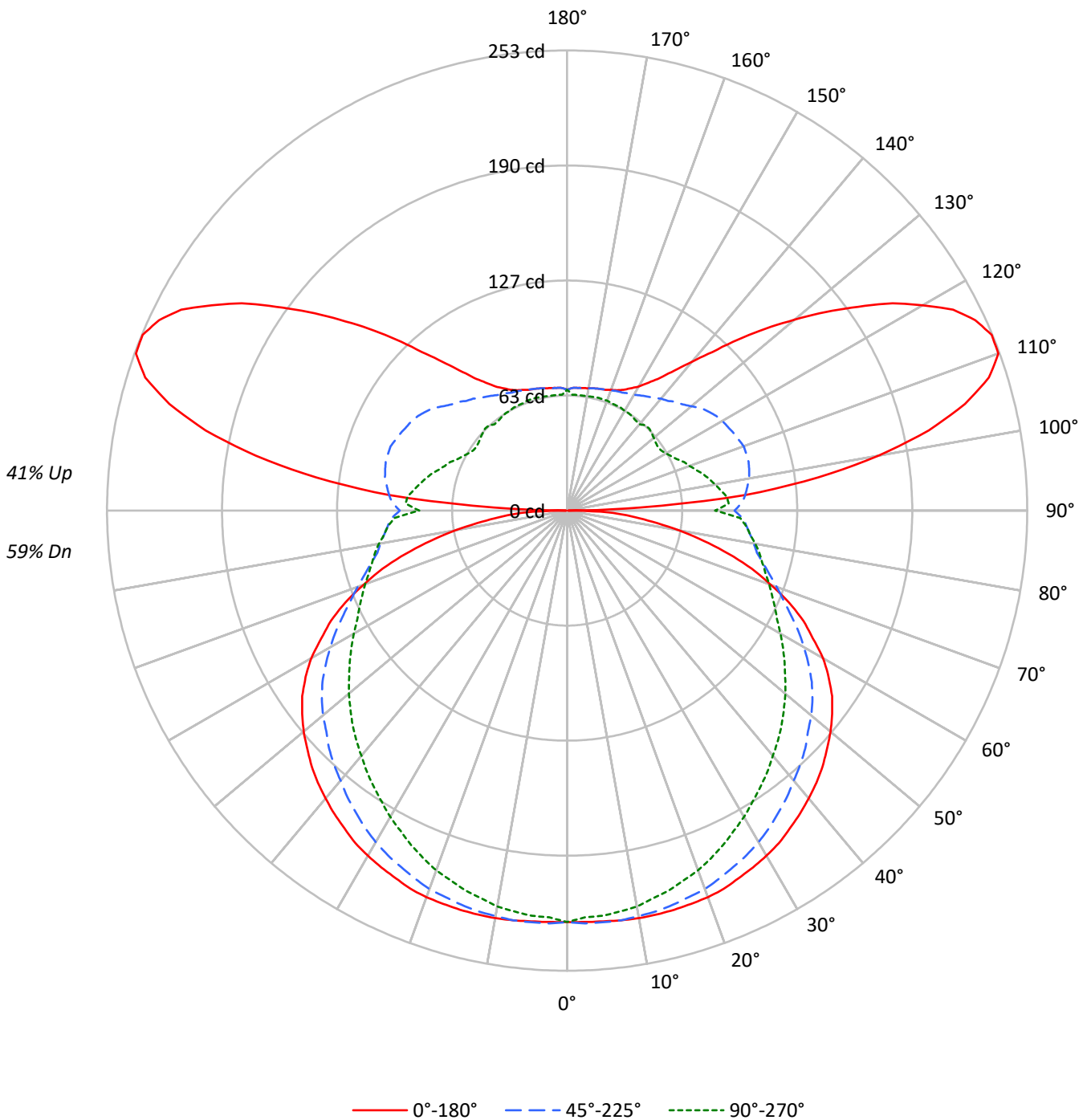
Lumens per Lamp: N/A  
Luminaire Lumens: 1590.4 lumens  
Efficiency: N/A  
Efficacy: 101.3 lumens/watt  
Spacing Criteria (0/90/45): 1.44 / 1.28 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1.92' x H: 0.17')  
CIE Type: General Diffuse

Input Watts (W): 15.7  
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	
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	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°	1905	1905	1905
5°	1903	1882	1850
10°	1917	1859	1811
15°	1936	1840	1767
20°	1966	1827	1730
25°	1992	1809	1689
30°	2029	1800	1653
35°	2069	1786	1623
40°	2117	1776	1600
45°	2178	1781	1590
50°	2246	1788	1581
55°	2323	1799	1579
60°	2381	1794	1592
65°	2407	1790	1635
70°	2370	1825	1726
75°	2261	1919	1871
80°	2021	2148	2109
85°	1711	2572	2476

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 90°  
 Luminance: 4078 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.6	1.4
10°-20°	63.2	4.0
20°-30°	99.3	6.2
30°-40°	126.3	7.9
40°-50°	142.2	8.9
50°-60°	145.7	9.2
60°-70°	134.7	8.5
70°-80°	113.1	7.1
80°-90°	93.5	5.9
90°-100°	107.7	6.8
100°-110°	135.4	8.5
110°-120°	128.8	8.1
120°-130°	100.8	6.3
130°-140°	71.1	4.5
140°-150°	48.5	3.1
150°-160°	32.8	2.1
160°-170°	19.4	1.2
170°-180°	6.4	0.4
0°-30°	184.1	11.6
0°-40°	310.4	19.5
0°-60°	598.2	37.6
0°-90°	939.5	59.1
90°-120°	371.8	23.4
90°-150°	592.2	37.2
90°-180°	651.0	40.9
0°-180°	1590.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	226	226	226	226	226	
5°	227	227	227	227	224	22
15°	227	226	224	221	216	64
25°	223	221	216	210	203	103
35°	213	210	203	194	185	134
45°	199	193	185	176	167	153
55°	178	171	164	155	146	159
65°	143	141	136	132	126	141
75°	92	99	111	115	111	97
85°	35	76	99	101	99	34
90°	0	85	92	86	81	9
95°	99	119	98	91	88	94
105°	226	179	103	83	77	234
115°	248	189	101	75	67	243
125°	195	155	95	70	61	176
135°	133	112	84	71	64	104
145°	89	85	77	69	63	57
155°	73	73	72	69	64	34
165°	69	69	69	68	64	20
175°	68	68	68	67	64	6
180°	66	66	66	66	66	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	226.2	226.2	226.2	226.2	226.2
2.5°	226.4	226.7	227.2	227.2	223.8
5°	226.7	227.0	227.2	227.0	223.6
7.5°	227.2	227.0	227.2	226.2	222.3
10°	227.5	227.2	226.4	225.1	221.0
12.5°	227.5	227.0	225.7	223.0	218.3
15°	227.2	226.4	224.4	221.2	216.2
17.5°	226.7	225.9	222.8	218.6	213.1
20°	226.2	224.9	221.5	216.5	210.5
22.5°	225.1	223.0	218.9	213.4	206.8
25°	223.0	221.2	216.2	209.7	202.9
27.5°	221.2	218.9	213.6	206.0	198.5
30°	219.1	216.2	210.5	202.1	194.5
32.5°	216.8	213.4	206.8	198.2	189.8
35°	213.4	209.7	202.6	194.0	185.4
37.5°	210.2	206.3	198.5	189.6	180.9
40°	206.6	202.1	193.8	184.6	176.0
42.5°	202.9	197.9	189.6	180.7	171.5
45°	198.7	193.0	185.1	175.7	166.8
47.5°	193.8	188.0	179.6	170.7	161.6
50°	189.1	183.3	175.2	165.5	156.6
52.5°	183.6	177.5	170.0	160.0	151.1
55°	177.8	171.0	164.2	154.8	145.9
57.5°	170.5	164.7	157.4	148.8	140.7
60°	162.6	157.2	150.4	143.0	135.4
62.5°	152.4	149.3	143.3	137.5	130.2
65°	143.3	141.2	135.7	132.3	126.0
67.5°	132.0	132.6	128.6	127.3	121.9
70°	119.2	122.4	122.6	122.9	118.2
72.5°	106.4	110.9	116.6	118.2	114.3
75°	92.0	98.8	111.4	114.8	111.1
77.5°	76.9	87.6	106.9	111.7	108.3
80°	62.2	79.8	104.1	108.3	105.1
82.5°	47.1	75.8	101.5	104.3	101.5
85°	35.3	76.1	99.1	100.9	98.8
87.5°	22.7	79.5	96.7	97.3	95.2
90°	0.5	85.2	92.0	85.5	81.3
92.5°	40.3	101.5	96.2	91.5	88.9
95°	98.6	119.0	98.3	90.7	88.1
97.5°	139.1	137.0	99.9	88.9	85.2
100°	173.9	152.7	101.7	87.3	82.6
102.5°	203.7	167.1	102.5	85.2	80.0
105°	226.4	178.9	103.3	83.2	77.4
107.5°	243.2	187.5	103.3	81.1	74.3
110°	252.3	193.0	103.3	79.0	71.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	252.6	193.0	102.0	76.4	69.6
115°	247.6	189.1	100.9	74.8	66.7
117.5°	239.3	182.8	99.6	72.4	64.6
120°	225.7	174.9	98.6	71.1	62.8
122.5°	212.1	165.3	97.0	70.6	61.4
125°	195.3	155.1	94.9	70.3	60.9
127.5°	179.4	144.3	92.6	70.6	61.4
130°	163.2	133.6	89.2	71.4	62.2
132.5°	148.0	121.9	86.3	71.6	63.0
135°	133.1	112.2	84.5	71.1	63.8
137.5°	118.2	103.3	81.8	69.6	63.5
140°	106.7	96.0	80.3	69.0	62.0
142.5°	97.0	89.7	78.2	69.3	62.2
145°	88.9	85.0	76.6	69.3	62.8
147.5°	83.4	81.1	75.0	69.3	63.3
150°	78.7	77.7	73.5	69.0	63.3
152.5°	75.8	75.3	72.7	69.0	63.8
155°	73.2	73.2	71.6	68.8	63.8
157.5°	71.6	71.6	71.1	68.5	63.8
160°	70.6	70.9	70.3	68.5	64.3
162.5°	69.6	69.8	69.8	68.2	64.3
165°	69.3	69.3	69.3	68.0	64.3
167.5°	68.8	68.8	68.8	67.7	64.1
170°	68.2	68.2	68.2	67.5	63.8
172.5°	68.0	67.7	67.7	67.2	63.8
175°	67.7	67.7	67.7	67.2	63.8
177.5°	67.5	67.5	67.5	66.9	63.8
180°	66.4	66.4	66.4	66.4	66.4



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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	11.39	12.43	12.25	13.33	14.46	11.03	12.07	11.89	12.96	14.09
	3H	13.57	14.52	14.44	15.42	16.58	13.69	14.63	14.55	15.54	16.69
	4H	14.40	15.30	15.28	16.21	17.37	15.05	15.96	15.94	16.87	18.03
	6H	15.02	15.86	15.91	16.77	17.95	16.54	17.38	17.43	18.29	19.47
	8H	15.23	16.04	16.14	16.97	18.15	17.31	18.11	18.21	19.04	20.22
	12H	15.38	16.15	16.29	17.08	18.28	18.13	18.90	19.04	19.82	21.03
4H	2H	12.05	12.95	12.94	13.86	15.02	11.77	12.68	12.66	13.58	14.75
	3H	14.48	15.26	15.38	16.19	17.37	14.65	15.42	15.55	16.36	17.54
	4H	15.48	16.20	16.39	17.13	18.33	16.18	16.90	17.09	17.83	19.03
	6H	16.28	16.91	17.20	17.87	19.07	17.84	18.47	18.76	19.43	20.63
	8H	16.59	17.19	17.52	18.14	19.35	18.71	19.31	19.64	20.26	21.47
	12H	16.83	17.37	17.77	18.34	19.56	19.64	20.18	20.58	21.15	22.37
8H	4H	16.05	16.64	16.97	17.59	18.81	16.64	17.23	17.56	18.18	19.40
	6H	17.10	17.61	18.05	18.60	19.81	18.53	19.03	19.48	20.02	21.24
	8H	17.59	18.04	18.55	19.02	20.25	19.56	20.02	20.52	21.00	22.23
	12H	18.01	18.42	18.98	19.39	20.67	20.68	21.09	21.65	22.06	23.34
12H	4H	16.19	16.73	17.14	17.70	18.92	16.69	17.23	17.64	18.20	19.43
	6H	17.39	17.84	18.35	18.82	20.05	18.68	19.13	19.63	20.11	21.34
	8H	17.99	18.40	18.96	19.37	20.65	19.80	20.20	20.76	21.18	22.45