

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: P624724

Luminaire Tested: S930DIP-W540-X2-USTD-W

Issue Date: 11/3/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P624724  
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-W540-X2-USTD-W  
Description: NEO-RAY COVERA DIRECT/INDIRECT 2-FOOT LED WaveStream LUMINAIRE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

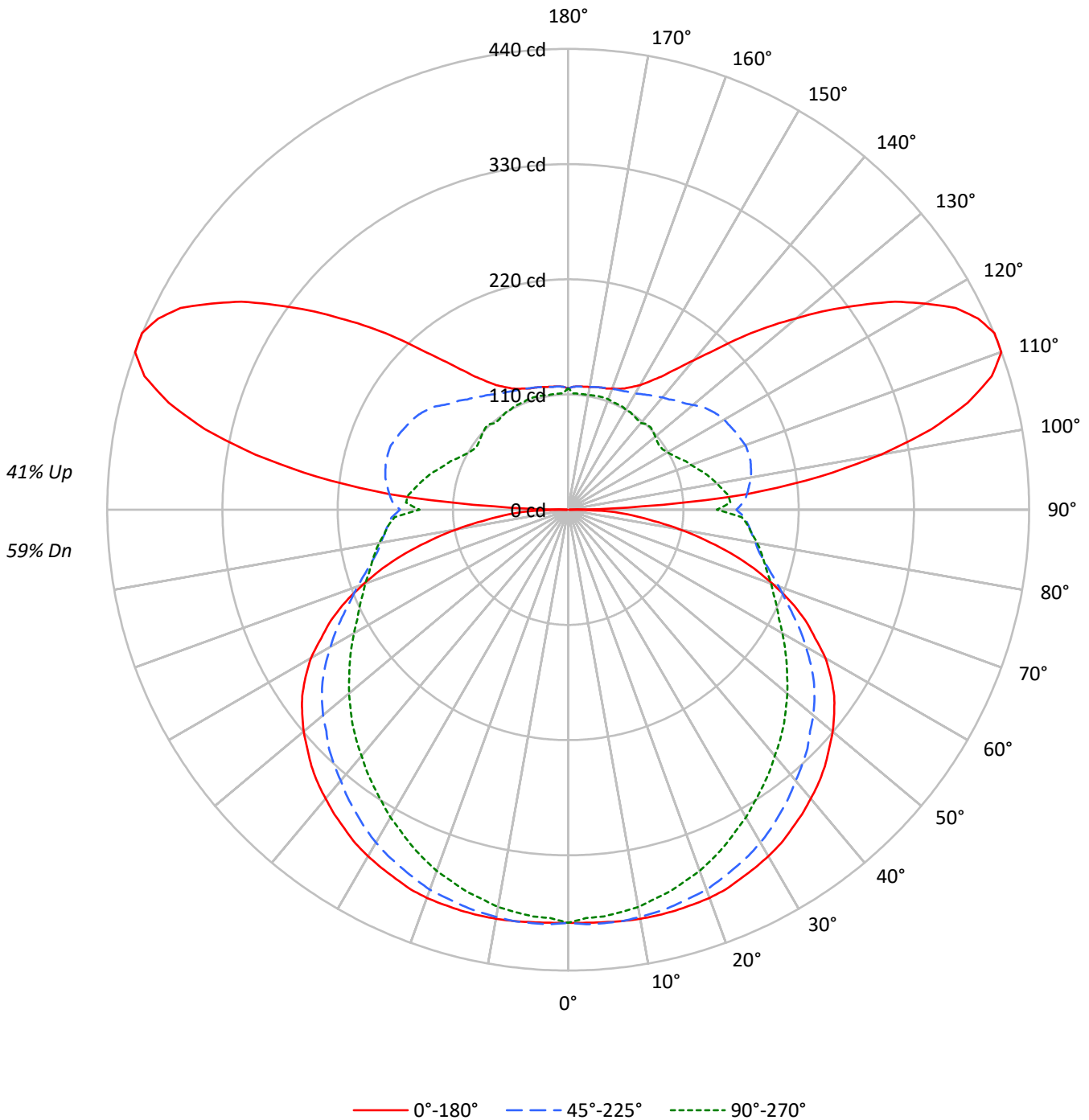
Lumens per Lamp: N/A  
Luminaire Lumens: 2772.8 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.44 / 1.28 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1.92' x H: 0.17')  
CIE Type: General Diffuse

Input Watts (W): 27.6  
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									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	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°	3322	3322	3322
5°	3317	3282	3226
10°	3341	3241	3156
15°	3377	3207	3081
20°	3427	3185	3016
25°	3474	3154	2945
30°	3538	3138	2883
35°	3606	3114	2829
40°	3692	3096	2789
45°	3798	3106	2772
50°	3914	3118	2757
55°	4050	3137	2753
60°	4153	3126	2777
65°	4197	3121	2851
70°	4133	3183	3009
75°	3944	3346	3263
80°	3525	3743	3678
85°	2981	4486	4317

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 90°  
 Luminance: 7112 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.7	1.4
10°-20°	110.2	4.0
20°-30°	173.1	6.2
30°-40°	220.2	7.9
40°-50°	248.0	8.9
50°-60°	254.0	9.2
60°-70°	234.8	8.5
70°-80°	197.2	7.1
80°-90°	163.0	5.9
90°-100°	187.8	6.8
100°-110°	236.0	8.5
110°-120°	224.5	8.1
120°-130°	175.7	6.3
130°-140°	124.0	4.5
140°-150°	84.6	3.1
150°-160°	57.2	2.1
160°-170°	33.8	1.2
170°-180°	11.2	0.4
0°-30°	321.0	11.6
0°-40°	541.1	19.5
0°-60°	1043.1	37.6
0°-90°	1638.2	59.1
90°-120°	648.2	23.4
90°-150°	1032.5	37.2
90°-180°	1135.0	40.9
0°-180°	2772.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	394	394	394	394	394	
5°	395	396	396	396	390	38
15°	396	395	391	386	377	112
25°	389	386	377	366	354	180
35°	372	366	353	338	323	233
45°	346	336	323	306	291	267
55°	310	298	286	270	254	276
65°	250	246	237	231	220	246
75°	160	172	194	200	194	168
85°	62	133	173	176	172	59
90°	1	149	160	149	142	15
95°	172	207	171	158	154	164
105°	395	312	180	145	135	408
115°	432	330	176	130	116	424
125°	341	270	166	123	106	306
135°	232	196	147	124	111	181
145°	155	148	134	121	109	100
155°	128	128	125	120	111	60
165°	121	121	121	118	112	34
175°	118	118	118	117	111	11
180°	116	116	116	116	116	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	394.4	394.4	394.4	394.4	394.4
2.5°	394.8	395.3	396.2	396.2	390.2
5°	395.3	395.7	396.2	395.7	389.8
7.5°	396.2	395.7	396.2	394.4	387.5
10°	396.6	396.2	394.8	392.5	385.2
12.5°	396.6	395.7	393.4	388.9	380.7
15°	396.2	394.8	391.2	385.7	377.0
17.5°	395.3	393.9	388.4	381.1	371.6
20°	394.4	392.1	386.1	377.5	367.0
22.5°	392.5	388.9	381.6	372.0	360.6
25°	388.9	385.7	377.0	365.6	353.8
27.5°	385.7	381.6	372.5	359.2	346.0
30°	382.0	377.0	367.0	352.4	339.2
32.5°	377.9	372.0	360.6	345.6	331.0
35°	372.0	365.6	353.3	338.3	323.2
37.5°	366.5	359.7	346.0	330.5	315.5
40°	360.2	352.4	337.8	321.9	306.8
42.5°	353.8	345.1	330.5	315.0	299.1
45°	346.5	336.5	322.8	306.4	290.9
47.5°	337.8	327.8	313.2	297.7	281.7
50°	329.6	319.6	305.5	288.6	273.1
52.5°	320.0	309.6	296.3	279.0	263.5
55°	310.0	298.2	286.3	269.9	254.4
57.5°	297.2	287.2	274.5	259.4	245.3
60°	283.6	274.0	262.1	249.4	236.2
62.5°	265.8	260.3	249.8	239.8	227.0
65°	249.8	246.2	236.6	230.7	219.7
67.5°	230.2	231.1	224.3	222.0	212.4
70°	207.9	213.4	213.8	214.3	206.1
72.5°	185.6	193.3	203.3	206.1	199.2
75°	160.5	172.3	194.2	200.1	193.8
77.5°	134.0	152.7	186.5	194.7	188.7
80°	108.5	139.0	181.4	188.7	183.3
82.5°	82.1	132.2	176.9	181.9	176.9
85°	61.5	132.7	172.8	176.0	172.3
87.5°	39.7	138.6	168.7	169.6	165.9
90°	0.9	148.6	160.5	149.1	141.8
92.5°	70.2	176.9	167.8	159.6	155.0
95°	171.9	207.4	171.4	158.2	153.6
97.5°	242.5	238.9	174.2	155.0	148.6
100°	303.2	266.2	177.3	152.3	144.1
102.5°	355.1	291.3	178.7	148.6	139.5
105°	394.8	311.8	180.1	145.0	134.9
107.5°	424.0	326.9	180.1	141.3	129.5
110°	439.9	336.5	180.1	137.7	124.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	440.4	336.5	177.8	133.1	121.3
115°	431.7	329.6	176.0	130.4	116.3
117.5°	417.1	318.7	173.7	126.3	112.6
120°	393.4	305.0	171.9	124.0	109.4
122.5°	369.7	288.1	169.1	123.1	107.1
125°	340.6	270.3	165.5	122.6	106.2
127.5°	312.7	251.7	161.4	123.1	107.1
130°	284.5	233.0	155.5	124.5	108.5
132.5°	258.0	212.4	150.4	124.9	109.9
135°	232.1	195.6	147.3	124.0	111.2
137.5°	206.1	180.1	142.7	121.3	110.8
140°	186.0	167.3	140.0	120.4	108.0
142.5°	169.1	156.4	136.3	120.8	108.5
145°	155.0	148.2	133.6	120.8	109.4
147.5°	145.4	141.3	130.8	120.8	110.3
150°	137.2	135.4	128.1	120.4	110.3
152.5°	132.2	131.3	126.7	120.4	111.2
155°	127.7	127.7	124.9	119.9	111.2
157.5°	124.9	124.9	124.0	119.4	111.2
160°	123.1	123.5	122.6	119.4	112.2
162.5°	121.3	121.7	121.7	119.0	112.2
165°	120.8	120.8	120.8	118.5	112.2
167.5°	119.9	119.9	119.9	118.1	111.7
170°	119.0	119.0	119.0	117.6	111.2
172.5°	118.5	118.1	118.1	117.2	111.2
175°	118.1	118.1	118.1	117.2	111.2
177.5°	117.6	117.6	117.6	116.7	111.2
180°	115.8	115.8	115.8	115.8	115.8



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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	13.32	14.37	14.18	15.26	16.39	12.96	14.00	13.82	14.90	16.03
	3H	15.51	16.46	16.37	17.36	18.51	15.62	16.57	16.49	17.47	18.62
	4H	16.33	17.24	17.22	18.14	19.31	16.99	17.89	17.87	18.80	19.96
	6H	16.95	17.79	17.85	18.71	19.88	18.47	19.31	19.36	20.22	21.40
	8H	17.16	17.97	18.07	18.90	20.08	19.24	20.04	20.14	20.98	22.15
	12H	17.32	18.09	18.23	19.01	20.22	20.06	20.83	20.97	21.75	22.96
4H	2H	13.98	14.88	14.87	15.79	16.95	13.71	14.61	14.59	15.52	16.68
	3H	16.41	17.19	17.31	18.13	19.30	16.58	17.36	17.48	18.29	19.47
	4H	17.41	18.13	18.32	19.06	20.26	18.11	18.83	19.02	19.76	20.96
	6H	18.21	18.84	19.14	19.80	21.00	19.77	20.40	20.70	21.36	22.56
	8H	18.52	19.12	19.45	20.07	21.28	20.64	21.24	21.57	22.19	23.41
	12H	18.76	19.30	19.71	20.27	21.49	21.57	22.11	22.52	23.08	24.30
8H	4H	17.98	18.57	18.90	19.52	20.74	18.57	19.16	19.49	20.11	21.33
	6H	19.04	19.54	19.99	20.53	21.74	20.46	20.96	21.41	21.95	23.17
	8H	19.52	19.97	20.48	20.95	22.18	21.50	21.95	22.45	22.93	24.16
	12H	19.94	20.35	20.91	21.32	22.60	22.62	23.02	23.58	23.99	25.27
12H	4H	18.12	18.66	19.07	19.63	20.85	18.62	19.17	19.57	20.13	21.36
	6H	19.32	19.77	20.28	20.75	21.98	20.61	21.06	21.57	22.04	23.27
	8H	19.92	20.33	20.89	21.30	22.58	21.73	22.13	22.69	23.11	24.38