

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: P624714

Luminaire Tested: S930DIP-W527-X4-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624714
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-W527-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

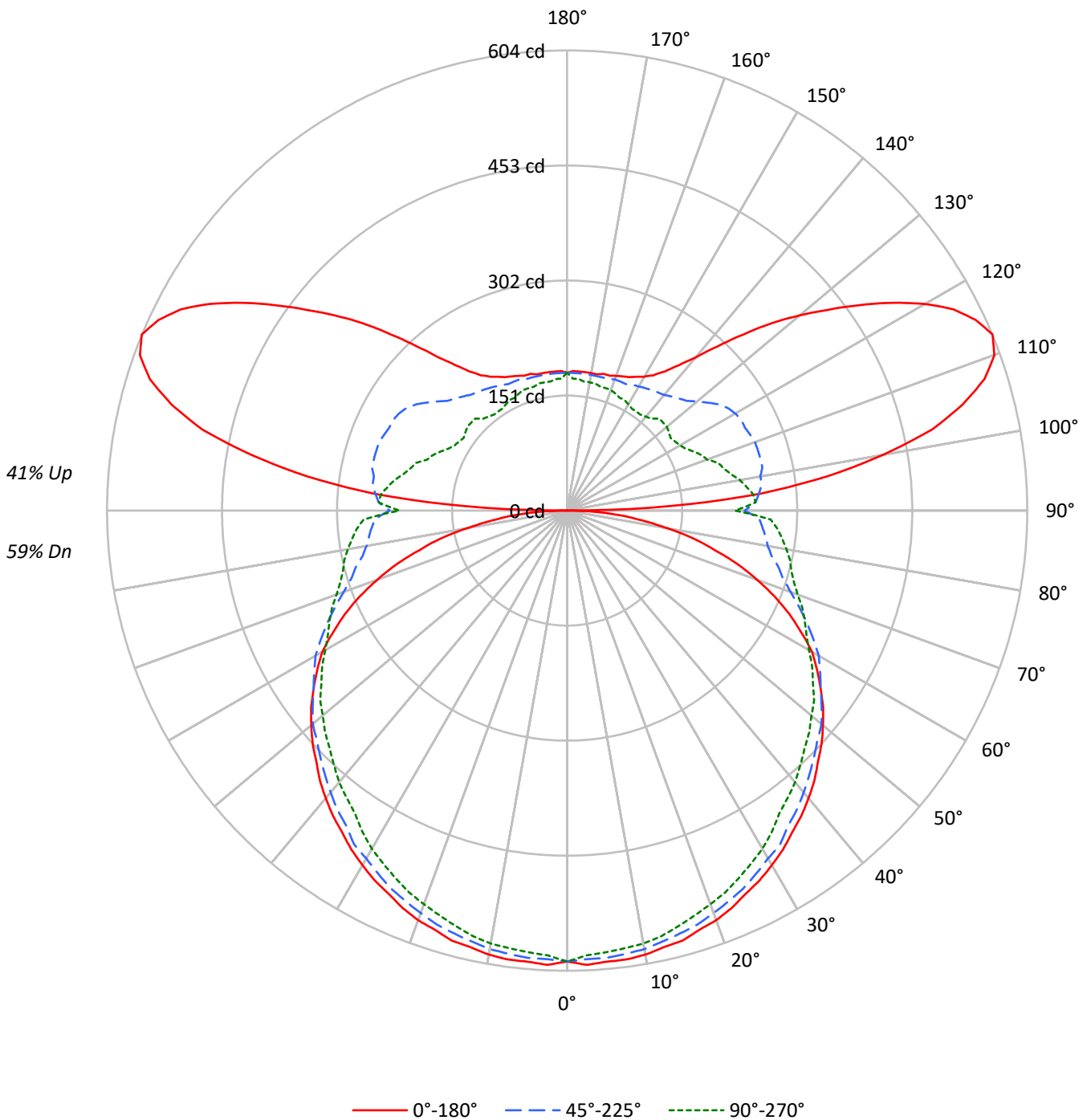
Lumens per Lamp: N/A
Luminaire Lumens: 4007.8 lumens
Efficiency: N/A
Efficacy: 58.8 lumens/watt
Spacing Criteria (0/90/45): 1.35 / 1.29 / 1.48
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 3.83' x H: 0.17')
CIE Type: General Diffuse

Input Watts (W): 68.2
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°	2493	2493	2493
5°	2503	2447	2408
10°	2512	2411	2364
15°	2519	2373	2307
20°	2524	2343	2258
25°	2527	2319	2216
30°	2549	2291	2179
35°	2570	2268	2124
40°	2614	2261	2116
45°	2657	2260	2101
50°	2731	2289	2113
55°	2808	2300	2130
60°	2910	2363	2154
65°	2935	2391	2233
70°	2915	2447	2350
75°	2809	2634	2564
80°	2602	2979	2931
85°	2237	3690	3474

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 6220 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	1.4
10°-20°	162.8	4.1
20°-30°	252.4	6.3
30°-40°	316.6	7.9
40°-50°	353.3	8.8
50°-60°	362.5	9.0
60°-70°	337.5	8.4
70°-80°	287.6	7.2
80°-90°	241.3	6.0
90°-100°	275.5	6.9
100°-110°	337.7	8.4
110°-120°	319.6	8.0
120°-130°	252.2	6.3
130°-140°	177.8	4.4
140°-150°	121.9	3.0
150°-160°	84.7	2.1
160°-170°	51.1	1.3
170°-180°	17.2	0.4
0°-30°	471.4	11.8
0°-40°	788.0	19.7
0°-60°	1503.7	37.5
0°-90°	2370.1	59.1
90°-120°	932.8	23.3
90°-150°	1484.7	37.0
90°-180°	1638.0	40.9
0°-180°	4007.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	594	594	589	589	582	57
15°	584	582	574	574	565	165
25°	555	552	547	545	532	257
35°	515	510	505	500	485	323
45°	466	461	458	456	441	360
55°	406	401	406	411	394	363
65°	322	329	347	352	344	317
75°	201	235	287	310	305	213
85°	69	178	258	277	277	69
90°	0	201	233	230	220	24
95°	255	277	253	250	245	239
105°	537	426	262	225	213	558
115°	592	448	258	198	183	580
125°	470	374	243	188	166	423
135°	327	275	208	181	171	256
145°	223	213	193	173	158	143
155°	193	191	183	176	163	90
165°	186	183	181	178	168	53
175°	183	183	181	181	173	17
180°	181	181	181	181	181	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	591.8	591.8	591.8	591.8	591.8
2.5°	596.8	594.3	589.3	591.8	584.4
5°	594.3	594.3	589.3	589.3	581.9
7.5°	594.3	591.8	586.9	586.9	579.4
10°	591.8	589.3	584.4	584.4	577.0
12.5°	586.9	586.9	579.4	579.4	572.0
15°	584.4	581.9	574.5	574.5	564.6
17.5°	577.0	574.5	569.5	567.1	557.1
20°	572.0	569.5	562.1	559.6	549.7
22.5°	564.6	562.1	554.7	552.2	542.3
25°	554.7	552.2	547.2	544.8	532.4
27.5°	547.2	544.8	537.3	534.9	522.5
30°	537.3	534.9	527.4	522.5	512.6
32.5°	527.4	522.5	520.0	512.6	500.2
35°	515.1	510.1	505.1	500.2	485.3
37.5°	505.1	500.2	495.2	490.3	475.4
40°	492.8	485.3	482.9	477.9	465.5
42.5°	480.4	473.0	470.5	468.0	453.1
45°	465.5	460.6	458.1	455.6	440.8
47.5°	453.1	445.7	445.7	443.2	430.9
50°	438.3	430.9	435.8	433.3	418.5
52.5°	423.4	418.5	421.0	423.4	408.6
55°	406.1	401.1	406.1	411.1	393.7
57.5°	388.8	386.3	393.7	396.2	381.3
60°	371.4	369.0	381.3	381.3	366.5
62.5°	346.7	349.1	364.0	366.5	354.1
65°	321.9	329.3	346.7	351.6	344.2
67.5°	294.7	309.5	329.3	341.7	334.3
70°	265.0	287.2	312.0	329.3	321.9
72.5°	235.2	262.5	297.1	319.4	312.0
75°	200.6	235.2	287.2	309.5	304.6
77.5°	170.9	210.5	274.9	302.1	299.6
80°	133.7	190.7	267.4	294.7	292.2
82.5°	99.0	178.3	262.5	287.2	284.8
85°	69.3	178.3	257.5	277.3	277.3
87.5°	37.1	188.2	252.6	269.9	267.4
90°	0.0	200.6	232.8	230.3	220.4
92.5°	136.2	237.7	247.6	250.1	247.6
95°	255.0	277.3	252.6	250.1	245.1
97.5°	344.2	317.0	257.5	242.7	237.7
100°	421.0	359.1	257.5	237.7	230.3
102.5°	490.3	393.7	262.5	230.3	220.4
105°	537.3	425.9	262.5	225.3	213.0
107.5°	574.5	448.2	262.5	220.4	208.0
110°	596.8	458.1	262.5	215.4	195.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	604.2	458.1	260.0	205.5	190.7
115°	591.8	448.2	257.5	198.1	183.2
117.5°	572.0	435.8	257.5	193.1	175.8
120°	542.3	418.5	255.0	190.7	170.9
122.5°	507.6	396.2	250.1	188.2	168.4
125°	470.5	373.9	242.7	188.2	165.9
127.5°	433.3	349.1	232.8	190.7	168.4
130°	398.7	324.4	222.9	190.7	170.9
132.5°	364.0	299.6	213.0	188.2	170.9
135°	326.9	274.9	208.0	180.8	170.9
137.5°	292.2	252.6	203.0	175.8	163.4
140°	262.5	237.7	198.1	173.3	161.0
142.5°	240.2	225.3	195.6	170.9	158.5
145°	222.9	213.0	193.1	173.3	158.5
147.5°	210.5	205.5	190.7	173.3	158.5
150°	203.0	200.6	188.2	173.3	161.0
152.5°	198.1	195.6	185.7	175.8	163.4
155°	193.1	190.7	183.2	175.8	163.4
157.5°	190.7	188.2	183.2	175.8	165.9
160°	188.2	185.7	183.2	175.8	168.4
162.5°	185.7	185.7	180.8	178.3	168.4
165°	185.7	183.2	180.8	178.3	168.4
167.5°	183.2	183.2	180.8	178.3	170.9
170°	183.2	183.2	180.8	178.3	170.9
172.5°	183.2	183.2	180.8	178.3	170.9
175°	183.2	183.2	180.8	180.8	173.3
177.5°	183.2	183.2	180.8	180.8	173.3
180°	180.8	180.8	180.8	180.8	180.8



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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	11.74	12.78	12.60	13.68	14.80	12.39	13.43	13.25	14.33	15.45
	3H	13.84	14.79	14.71	15.69	16.84	15.17	16.12	16.03	17.02	18.17
	4H	14.62	15.53	15.51	16.43	17.60	16.62	17.53	17.51	18.44	19.60
	6H	15.20	16.04	16.09	16.95	18.13	18.25	19.09	19.14	20.00	21.18
	8H	15.39	16.19	16.29	17.12	18.30	19.11	19.92	20.01	20.85	22.02
	12H	15.51	16.28	16.41	17.20	18.40	20.06	20.83	20.97	21.76	22.96
4H	2H	12.57	13.48	13.46	14.38	15.55	13.06	13.96	13.95	14.87	16.03
	3H	14.92	15.69	15.81	16.63	17.81	16.06	16.84	16.96	17.77	18.95
	4H	15.88	16.59	16.79	17.53	18.73	17.69	18.41	18.60	19.34	20.54
	6H	16.63	17.26	17.55	18.22	19.42	19.50	20.14	20.42	21.09	22.29
	8H	16.91	17.50	17.83	18.45	19.67	20.48	21.07	21.40	22.02	23.24
	12H	17.10	17.65	18.05	18.61	19.84	21.54	22.09	22.49	23.05	24.27
8H	4H	16.60	17.19	17.52	18.14	19.36	18.10	18.69	19.02	19.64	20.86
	6H	17.63	18.14	18.58	19.12	20.34	20.14	20.64	21.09	21.63	22.85
	8H	18.09	18.54	19.04	19.52	20.75	21.28	21.74	22.24	22.71	23.94
	12H	18.46	18.86	19.42	19.84	21.11	22.55	22.95	23.51	23.93	25.20
12H	4H	16.81	17.35	17.75	18.32	19.54	18.14	18.68	19.08	19.65	20.87
	6H	18.00	18.46	18.96	19.43	20.66	20.26	20.72	21.22	21.70	22.93
	8H	18.59	18.99	19.55	19.97	21.24	21.49	21.90	22.45	22.87	24.14