

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: P624720

Luminaire Tested: S930DIP-W535-X2-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624720
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-W535-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

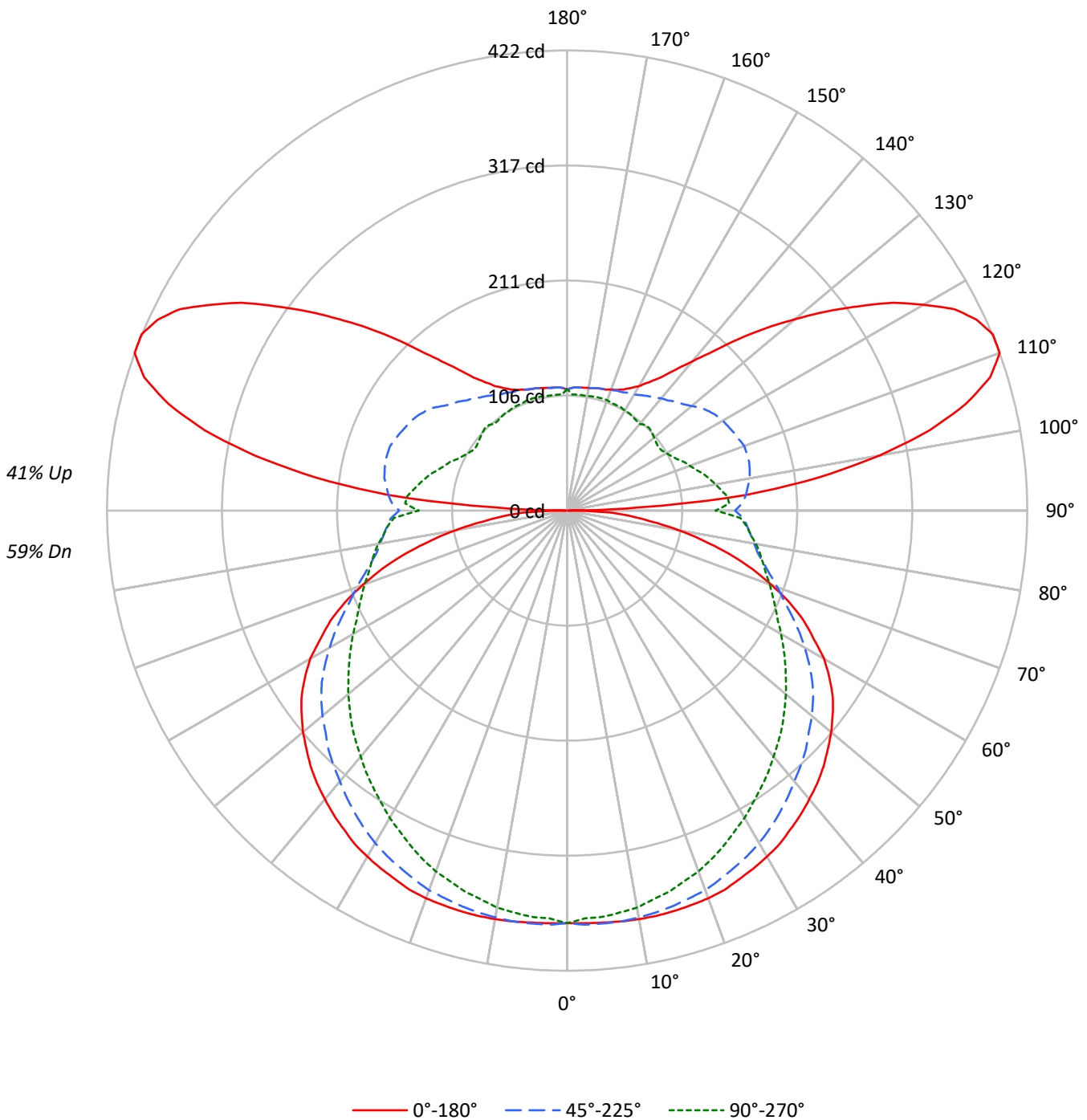
Lumens per Lamp: N/A
Luminaire Lumens: 2660.3 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.28 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1.92' x H: 0.17')
CIE Type: General Diffuse

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°	3187	3187	3187
5°	3182	3149	3095
10°	3206	3110	3028
15°	3239	3077	2956
20°	3287	3056	2893
25°	3333	3026	2825
30°	3395	3011	2766
35°	3460	2988	2714
40°	3541	2970	2676
45°	3643	2980	2660
50°	3755	2991	2645
55°	3885	3010	2642
60°	3984	2999	2664
65°	4027	2995	2735
70°	3964	3053	2887
75°	3784	3210	3130
80°	3382	3592	3527
85°	2860	4304	4142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 6825 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.1	1.4
10°-20°	105.7	4.0
20°-30°	166.1	6.2
30°-40°	211.2	7.9
40°-50°	237.9	8.9
50°-60°	243.7	9.2
60°-70°	225.3	8.5
70°-80°	189.2	7.1
80°-90°	156.4	5.9
90°-100°	180.1	6.8
100°-110°	226.4	8.5
110°-120°	215.4	8.1
120°-130°	168.5	6.3
130°-140°	119.0	4.5
140°-150°	81.1	3.1
150°-160°	54.9	2.1
160°-170°	32.4	1.2
170°-180°	10.7	0.4
0°-30°	308.0	11.6
0°-40°	519.2	19.5
0°-60°	1000.7	37.6
0°-90°	1571.7	59.1
90°-120°	621.9	23.4
90°-150°	990.6	37.2
90°-180°	1089.0	40.9
0°-180°	2660.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	378	378	378	378	378	
5°	379	380	380	380	374	36
15°	380	379	375	370	362	108
25°	373	370	362	351	339	172
35°	357	351	339	324	310	224
45°	332	323	310	294	279	257
55°	297	286	275	259	244	265
65°	240	236	227	221	211	236
75°	154	165	186	192	186	162
85°	59	127	166	169	165	57
90°	1	143	154	143	136	15
95°	165	199	164	152	147	157
105°	379	299	173	139	130	392
115°	414	316	169	125	112	406
125°	327	259	159	118	102	294
135°	223	188	141	119	107	174
145°	149	142	128	116	105	96
155°	122	122	120	115	107	57
165°	116	116	116	114	108	33
175°	113	113	113	112	107	11
180°	111	111	111	111	111	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	378.3	378.3	378.3	378.3	378.3
2.5°	378.8	379.2	380.1	380.1	374.4
5°	379.2	379.7	380.1	379.7	374.0
7.5°	380.1	379.7	380.1	378.3	371.8
10°	380.5	380.1	378.8	376.6	369.6
12.5°	380.5	379.7	377.5	373.1	365.2
15°	380.1	378.8	375.3	370.0	361.7
17.5°	379.2	377.9	372.7	365.7	356.5
20°	378.3	376.2	370.5	362.2	352.1
22.5°	376.6	373.1	366.1	356.9	346.0
25°	373.1	370.0	361.7	350.8	339.4
27.5°	370.0	366.1	357.3	344.7	332.0
30°	366.5	361.7	352.1	338.1	325.4
32.5°	362.6	356.9	346.0	331.5	317.5
35°	356.9	350.8	339.0	324.5	310.1
37.5°	351.7	345.1	332.0	317.1	302.7
40°	345.5	338.1	324.1	308.8	294.4
42.5°	339.4	331.1	317.1	302.2	286.9
45°	332.4	322.8	309.7	293.9	279.1
47.5°	324.1	314.5	300.5	285.6	270.3
50°	316.2	306.6	293.0	276.9	262.0
52.5°	307.0	297.0	284.3	267.7	252.8
55°	297.4	286.1	274.7	258.9	244.1
57.5°	285.2	275.6	263.3	248.9	235.3
60°	272.1	262.9	251.5	239.3	226.6
62.5°	255.0	249.7	239.7	230.1	217.8
65°	239.7	236.2	227.0	221.3	210.8
67.5°	220.9	221.8	215.2	213.0	203.8
70°	199.4	204.7	205.1	205.6	197.7
72.5°	178.0	185.5	195.1	197.7	191.1
75°	154.0	165.3	186.3	192.0	185.9
77.5°	128.6	146.5	178.9	186.8	181.1
80°	104.1	133.4	174.1	181.1	175.8
82.5°	78.7	126.8	169.7	174.5	169.7
85°	59.0	127.3	165.8	168.8	165.3
87.5°	38.1	133.0	161.8	162.7	159.2
90°	0.9	142.6	154.0	143.0	136.0
92.5°	67.4	169.7	161.0	153.1	148.7
95°	164.9	199.0	164.5	151.8	147.4
97.5°	232.7	229.2	167.1	148.7	142.6
100°	290.9	255.4	170.1	146.1	138.2
102.5°	340.7	279.5	171.5	142.6	133.8
105°	378.8	299.2	172.8	139.1	129.5
107.5°	406.8	313.6	172.8	135.6	124.2
110°	422.1	322.8	172.8	132.1	119.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	422.5	322.8	170.6	127.7	116.3
115°	414.2	316.2	168.8	125.1	111.5
117.5°	400.2	305.7	166.6	121.2	108.0
120°	377.5	292.6	164.9	119.0	105.0
122.5°	354.7	276.4	162.3	118.1	102.8
125°	326.7	259.4	158.8	117.7	101.9
127.5°	300.0	241.4	154.8	118.1	102.8
130°	272.9	223.5	149.1	119.4	104.1
132.5°	247.6	203.8	144.3	119.8	105.4
135°	222.6	187.6	141.3	119.0	106.7
137.5°	197.7	172.8	136.9	116.3	106.3
140°	178.5	160.5	134.3	115.5	103.7
142.5°	162.3	150.0	130.8	115.9	104.1
145°	148.7	142.2	128.2	115.9	105.0
147.5°	139.5	135.6	125.5	115.9	105.8
150°	131.7	129.9	122.9	115.5	105.8
152.5°	126.8	126.0	121.6	115.5	106.7
155°	122.5	122.5	119.8	115.0	106.7
157.5°	119.8	119.8	119.0	114.6	106.7
160°	118.1	118.5	117.7	114.6	107.6
162.5°	116.3	116.8	116.8	114.2	107.6
165°	115.9	115.9	115.9	113.7	107.6
167.5°	115.0	115.0	115.0	113.3	107.2
170°	114.2	114.2	114.2	112.8	106.7
172.5°	113.7	113.3	113.3	112.4	106.7
175°	113.3	113.3	113.3	112.4	106.7
177.5°	112.8	112.8	112.8	112.0	106.7
180°	111.1	111.1	111.1	111.1	111.1



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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	13.18	14.22	14.04	15.12	16.24	12.82	13.86	13.68	14.75	15.88
	3H	15.36	16.31	16.23	17.21	18.37	15.47	16.42	16.34	17.32	18.48
	4H	16.19	17.09	17.07	18.00	19.16	16.84	17.75	17.73	18.65	19.82
	6H	16.81	17.65	17.70	18.56	19.74	18.32	19.17	19.22	20.08	21.26
	8H	17.02	17.83	17.92	18.76	19.93	19.09	19.90	20.00	20.83	22.01
	12H	17.17	17.94	18.08	18.87	20.07	19.91	20.68	20.82	21.61	22.81
4H	2H	13.84	14.74	14.72	15.65	16.81	13.56	14.47	14.45	15.37	16.53
	3H	16.27	17.04	17.17	17.98	19.16	16.44	17.21	17.34	18.15	19.33
	4H	17.27	17.99	18.18	18.92	20.12	17.97	18.68	18.88	19.62	20.82
	6H	18.07	18.70	18.99	19.66	20.86	19.63	20.26	20.55	21.22	22.42
	8H	18.38	18.97	19.30	19.92	21.14	20.50	21.09	21.42	22.04	23.26
	12H	18.62	19.16	19.56	20.13	21.35	21.43	21.97	22.37	22.93	24.16
8H	4H	17.83	18.43	18.76	19.38	20.59	18.43	19.02	19.35	19.97	21.19
	6H	18.89	19.40	19.84	20.39	21.60	20.31	20.82	21.27	21.81	23.02
	8H	19.38	19.83	20.34	20.81	22.04	21.35	21.80	22.31	22.78	24.01
	12H	19.80	20.20	20.76	21.18	22.45	22.47	22.88	23.44	23.85	25.13
12H	4H	17.98	18.52	18.92	19.49	20.71	18.48	19.02	19.43	19.99	21.21
	6H	19.18	19.63	20.14	20.61	21.84	20.46	20.92	21.42	21.90	23.13
	8H	19.78	20.18	20.74	21.16	22.44	21.59	21.99	22.55	22.96	24.24