

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: P624698

Luminaire Tested: S930DIP-W427-X4-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624698
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-W427-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

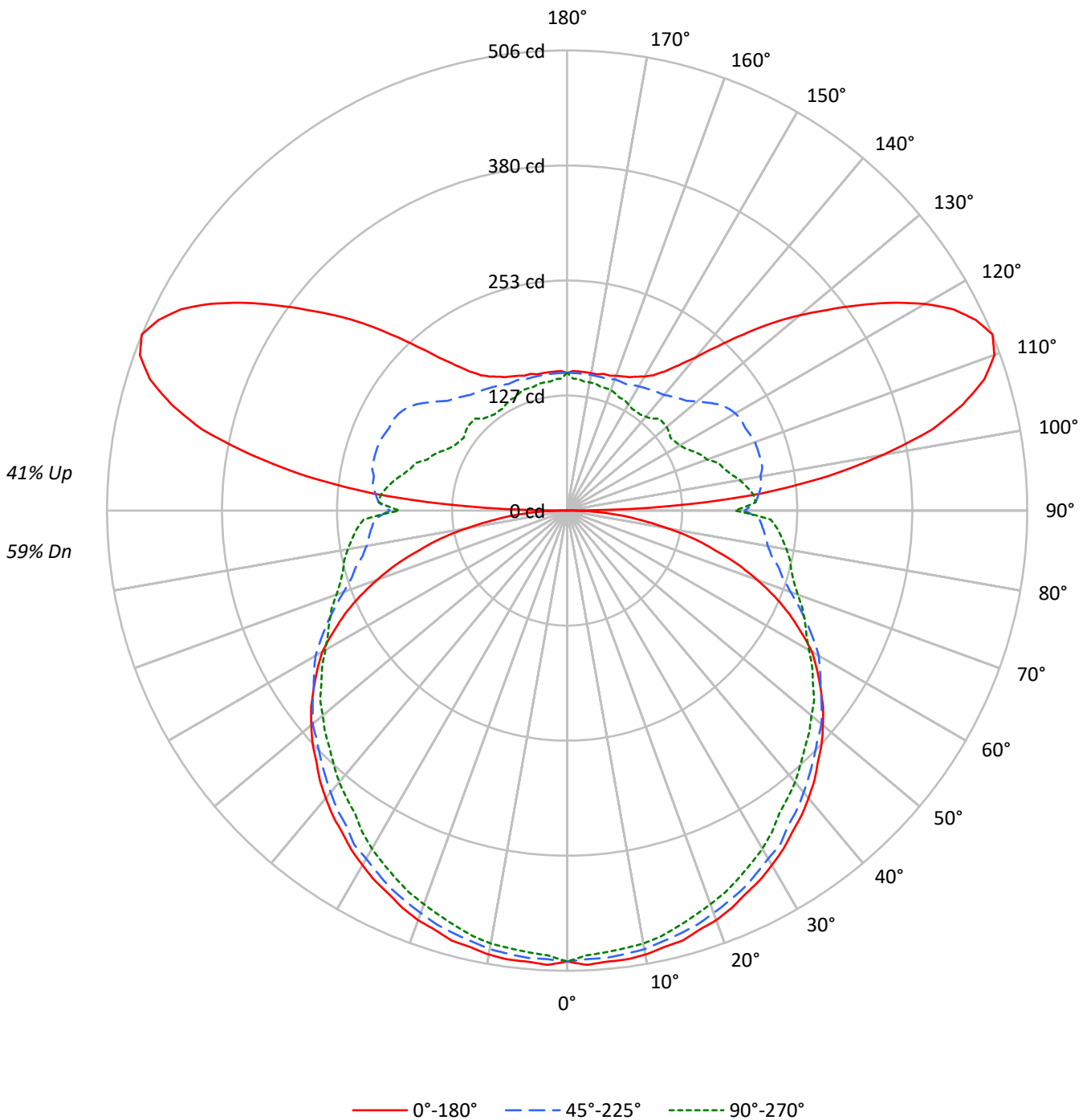
Lumens per Lamp: N/A
Luminaire Lumens: 3357.6 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.35 / 1.29 / 1.48
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 3.83' x H: 0.17')
CIE Type: General Diffuse

Input Watts (W): 41.7
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	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°	2088	2088	2088
5°	2097	2050	2017
10°	2104	2020	1980
15°	2110	1988	1933
20°	2114	1962	1892
25°	2117	1943	1856
30°	2136	1919	1825
35°	2153	1900	1779
40°	2190	1894	1773
45°	2226	1893	1760
50°	2288	1918	1770
55°	2352	1927	1785
60°	2438	1980	1805
65°	2459	2003	1871
70°	2442	2050	1969
75°	2352	2207	2148
80°	2179	2496	2456
85°	1876	3093	2910

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 5209 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.1	1.4
10°-20°	136.4	4.1
20°-30°	211.5	6.3
30°-40°	265.2	7.9
40°-50°	296.0	8.8
50°-60°	303.7	9.0
60°-70°	282.7	8.4
70°-80°	241.0	7.2
80°-90°	202.1	6.0
90°-100°	230.8	6.9
100°-110°	282.9	8.4
110°-120°	267.8	8.0
120°-130°	211.3	6.3
130°-140°	148.9	4.4
140°-150°	102.1	3.0
150°-160°	71.0	2.1
160°-170°	42.8	1.3
170°-180°	14.4	0.4
0°-30°	394.9	11.8
0°-40°	660.2	19.7
0°-60°	1259.8	37.5
0°-90°	1985.6	59.1
90°-120°	781.5	23.3
90°-150°	1243.9	37.0
90°-180°	1372.0	40.9
0°-180°	3357.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	496	496	496	496	496	
5°	498	498	494	494	488	48
15°	490	488	481	481	473	138
25°	465	463	458	456	446	215
35°	432	427	423	419	407	271
45°	390	386	384	382	369	302
55°	340	336	340	344	330	305
65°	270	276	290	295	288	266
75°	168	197	241	259	255	178
85°	58	149	216	232	232	58
90°	0	168	195	193	185	20
95°	214	232	212	210	205	200
105°	450	357	220	189	178	467
115°	496	376	216	166	154	486
125°	394	313	203	158	139	355
135°	274	230	174	151	143	214
145°	187	178	162	145	133	120
155°	162	160	154	147	137	76
165°	156	154	151	149	141	44
175°	154	154	151	151	145	15
180°	151	151	151	151	151	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	495.8	495.8	495.8	495.8	495.8
2.5°	500.0	497.9	493.7	495.8	489.6
5°	497.9	497.9	493.7	493.7	487.5
7.5°	497.9	495.8	491.7	491.7	485.4
10°	495.8	493.7	489.6	489.6	483.4
12.5°	491.7	491.7	485.4	485.4	479.2
15°	489.6	487.5	481.3	481.3	473.0
17.5°	483.4	481.3	477.1	475.1	466.8
20°	479.2	477.1	470.9	468.8	460.5
22.5°	473.0	470.9	464.7	462.6	454.3
25°	464.7	462.6	458.5	456.4	446.0
27.5°	458.5	456.4	450.2	448.1	437.7
30°	450.2	448.1	441.9	437.7	429.4
32.5°	441.9	437.7	435.7	429.4	419.1
35°	431.5	427.4	423.2	419.1	406.6
37.5°	423.2	419.1	414.9	410.8	398.3
40°	412.8	406.6	404.5	400.4	390.0
42.5°	402.5	396.2	394.2	392.1	379.6
45°	390.0	385.9	383.8	381.7	369.3
47.5°	379.6	373.4	373.4	371.3	361.0
50°	367.2	361.0	365.1	363.0	350.6
52.5°	354.7	350.6	352.7	354.7	342.3
55°	340.2	336.1	340.2	344.4	329.9
57.5°	325.7	323.6	329.9	331.9	319.5
60°	311.2	309.1	319.5	319.5	307.0
62.5°	290.4	292.5	305.0	307.0	296.7
65°	269.7	275.9	290.4	294.6	288.4
67.5°	246.9	259.3	275.9	286.3	280.1
70°	222.0	240.6	261.4	275.9	269.7
72.5°	197.1	219.9	248.9	267.6	261.4
75°	168.0	197.1	240.6	259.3	255.2
77.5°	143.1	176.3	230.3	253.1	251.0
80°	112.0	159.7	224.0	246.9	244.8
82.5°	83.0	149.4	219.9	240.6	238.6
85°	58.1	149.4	215.8	232.3	232.3
87.5°	31.1	157.7	211.6	226.1	224.0
90°	0.0	168.0	195.0	192.9	184.6
92.5°	114.1	199.2	207.5	209.5	207.5
95°	213.7	232.3	211.6	209.5	205.4
97.5°	288.4	265.5	215.8	203.3	199.2
100°	352.7	300.8	215.8	199.2	192.9
102.5°	410.8	329.9	219.9	192.9	184.6
105°	450.2	356.8	219.9	188.8	178.4
107.5°	481.3	375.5	219.9	184.6	174.3
110°	500.0	383.8	219.9	180.5	163.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	506.2	383.8	217.8	172.2	159.7
115°	495.8	375.5	215.8	166.0	153.5
117.5°	479.2	365.1	215.8	161.8	147.3
120°	454.3	350.6	213.7	159.7	143.1
122.5°	425.3	331.9	209.5	157.7	141.1
125°	394.2	313.3	203.3	157.7	139.0
127.5°	363.0	292.5	195.0	159.7	141.1
130°	334.0	271.8	186.7	159.7	143.1
132.5°	305.0	251.0	178.4	157.7	143.1
135°	273.8	230.3	174.3	151.4	143.1
137.5°	244.8	211.6	170.1	147.3	136.9
140°	219.9	199.2	166.0	145.2	134.8
142.5°	201.2	188.8	163.9	143.1	132.8
145°	186.7	178.4	161.8	145.2	132.8
147.5°	176.3	172.2	159.7	145.2	132.8
150°	170.1	168.0	157.7	145.2	134.8
152.5°	166.0	163.9	155.6	147.3	136.9
155°	161.8	159.7	153.5	147.3	136.9
157.5°	159.7	157.7	153.5	147.3	139.0
160°	157.7	155.6	153.5	147.3	141.1
162.5°	155.6	155.6	151.4	149.4	141.1
165°	155.6	153.5	151.4	149.4	141.1
167.5°	153.5	153.5	151.4	149.4	143.1
170°	153.5	153.5	151.4	149.4	143.1
172.5°	153.5	153.5	151.4	149.4	143.1
175°	153.5	153.5	151.4	151.4	145.2
177.5°	153.5	153.5	151.4	151.4	145.2
180°	151.4	151.4	151.4	151.4	151.4



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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	11.13	12.17	11.98	13.06	14.19	11.78	12.82	12.64	13.71	14.84
	3H	13.22	14.17	14.09	15.07	16.23	14.55	15.50	15.42	16.40	17.55
	4H	14.01	14.91	14.89	15.82	16.98	16.01	16.91	16.89	17.82	18.98
	6H	14.58	15.43	15.48	16.34	17.51	17.63	18.47	18.53	19.39	20.56
	8H	14.77	15.58	15.67	16.51	17.68	18.50	19.30	19.40	20.24	21.41
	12H	14.89	15.66	15.80	16.59	17.79	19.45	20.22	20.36	21.15	22.35
4H	2H	11.96	12.86	12.84	13.77	14.93	12.44	13.35	13.33	14.26	15.42
	3H	14.30	15.08	15.20	16.01	17.19	15.45	16.22	16.35	17.16	18.34
	4H	15.26	15.98	16.17	16.91	18.11	17.08	17.79	17.99	18.73	19.93
	6H	16.02	16.65	16.94	17.60	18.80	18.89	19.52	19.81	20.48	21.67
	8H	16.29	16.89	17.22	17.84	19.05	19.86	20.46	20.79	21.41	22.62
	12H	16.49	17.03	17.43	18.00	19.22	20.93	21.47	21.87	22.44	23.66
8H	4H	15.98	16.58	16.91	17.53	18.74	17.48	18.08	18.41	19.03	20.24
	6H	17.01	17.52	17.96	18.51	19.72	19.52	20.03	20.47	21.02	22.23
	8H	17.47	17.92	18.43	18.90	20.13	20.67	21.12	21.62	22.10	23.33
	12H	17.84	18.25	18.81	19.22	20.50	21.93	22.34	22.90	23.31	24.59
12H	4H	16.19	16.73	17.14	17.70	18.92	17.52	18.06	18.47	19.03	20.25
	6H	17.39	17.84	18.34	18.82	20.05	19.65	20.10	20.61	21.08	22.31
	8H	17.97	18.38	18.94	19.35	20.63	20.88	21.28	21.84	22.25	23.53