

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: P624686

Luminaire Tested: S930DIP-W330-X4-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624686
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-W330-X4-USTD-W
Description: NEO-RAY COVERA DIRECT/INDIRECT 4-FOOT LED WaveStream LUMINAIRE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

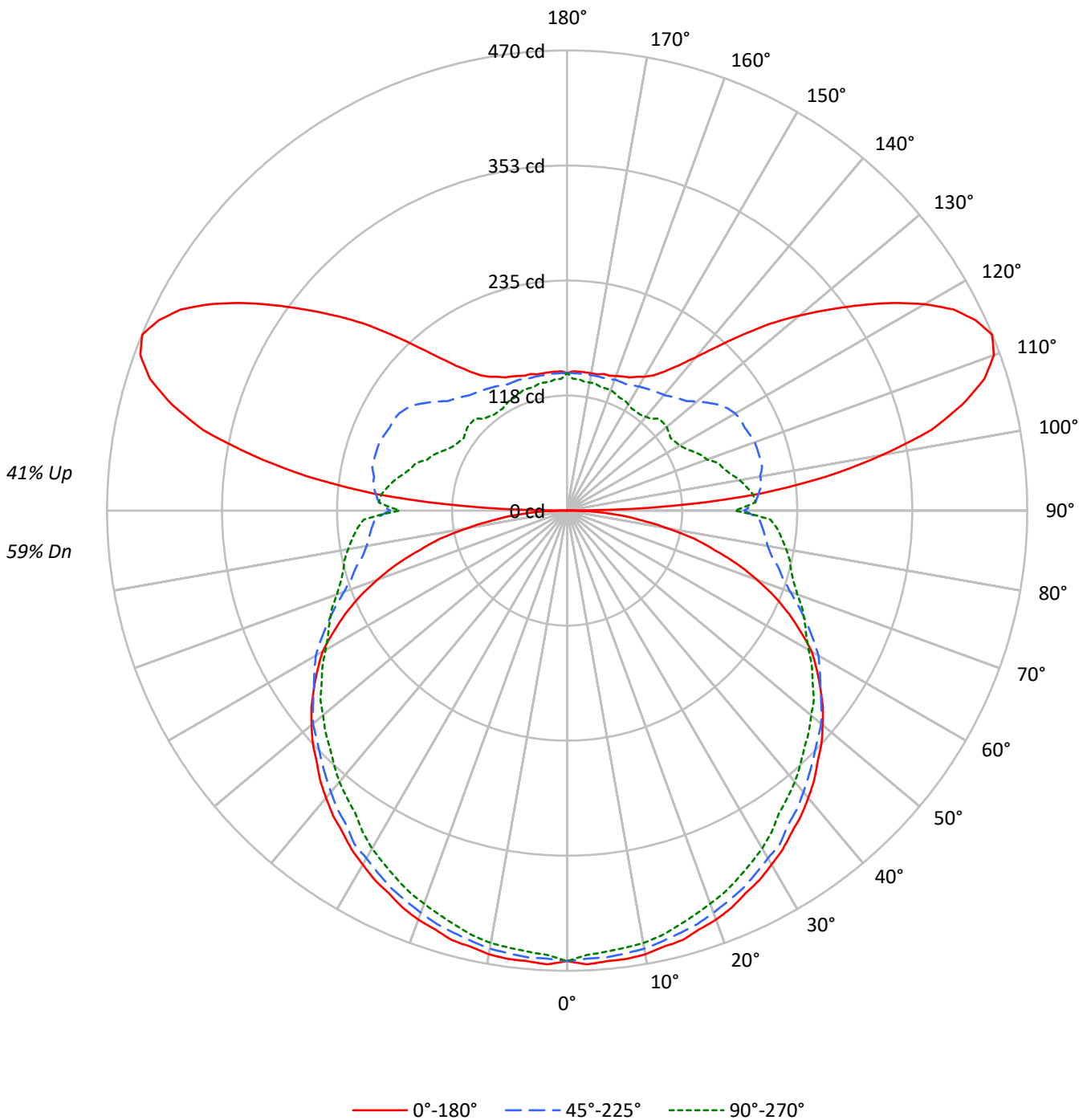
Lumens per Lamp: N/A
Luminaire Lumens: 3115.5 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.35 / 1.29 / 1.48
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 3.83' x H: 0.17')
CIE Type: General Diffuse

Input Watts (W): 29.5
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°	1938	1938	1938
5°	1946	1902	1872
10°	1953	1874	1837
15°	1958	1845	1794
20°	1962	1821	1756
25°	1964	1803	1723
30°	1982	1781	1694
35°	1998	1763	1651
40°	2032	1758	1645
45°	2066	1757	1633
50°	2123	1780	1642
55°	2183	1788	1656
60°	2262	1837	1675
65°	2281	1859	1736
70°	2266	1902	1827
75°	2183	2048	1994
80°	2022	2316	2278
85°	1740	2869	2701

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 4834 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	1.4
10°-20°	126.5	4.1
20°-30°	196.2	6.3
30°-40°	246.1	7.9
40°-50°	274.6	8.8
50°-60°	281.8	9.0
60°-70°	262.3	8.4
70°-80°	223.6	7.2
80°-90°	187.6	6.0
90°-100°	214.2	6.9
100°-110°	262.5	8.4
110°-120°	248.5	8.0
120°-130°	196.1	6.3
130°-140°	138.2	4.4
140°-150°	94.7	3.0
150°-160°	65.8	2.1
160°-170°	39.7	1.3
170°-180°	13.4	0.4
0°-30°	366.5	11.8
0°-40°	612.6	19.7
0°-60°	1168.9	37.5
0°-90°	1842.4	59.1
90°-120°	725.1	23.3
90°-150°	1154.1	37.0
90°-180°	1273.0	40.9
0°-180°	3115.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	462	462	458	458	452	44
15°	454	452	447	447	439	128
25°	431	429	425	424	414	199
35°	400	396	393	389	377	251
45°	362	358	356	354	343	280
55°	316	312	316	320	306	283
65°	250	256	270	273	268	247
75°	156	183	223	241	237	165
85°	54	139	200	216	216	54
90°	0	156	181	179	171	18
95°	198	216	196	194	191	186
105°	418	331	204	175	166	433
115°	460	348	200	154	142	451
125°	366	291	189	146	129	329
135°	254	214	162	140	133	199
145°	173	166	150	135	123	111
155°	150	148	142	137	127	70
165°	144	142	140	139	131	41
175°	142	142	140	140	135	14
180°	140	140	140	140	140	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	460.1	460.1	460.1	460.1	460.1
2.5°	463.9	462.0	458.1	460.1	454.3
5°	462.0	462.0	458.1	458.1	452.4
7.5°	462.0	460.1	456.2	456.2	450.4
10°	460.1	458.1	454.3	454.3	448.5
12.5°	456.2	456.2	450.4	450.4	444.7
15°	454.3	452.4	446.6	446.6	438.9
17.5°	448.5	446.6	442.7	440.8	433.1
20°	444.7	442.7	437.0	435.0	427.3
22.5°	438.9	437.0	431.2	429.3	421.6
25°	431.2	429.3	425.4	423.5	413.9
27.5°	425.4	423.5	417.7	415.8	406.2
30°	417.7	415.8	410.0	406.2	398.5
32.5°	410.0	406.2	404.2	398.5	388.8
35°	400.4	396.5	392.7	388.8	377.3
37.5°	392.7	388.8	385.0	381.1	369.6
40°	383.1	377.3	375.4	371.5	361.9
42.5°	373.4	367.7	365.7	363.8	352.3
45°	361.9	358.0	356.1	354.2	342.6
47.5°	352.3	346.5	346.5	344.6	334.9
50°	340.7	334.9	338.8	336.9	325.3
52.5°	329.2	325.3	327.2	329.2	317.6
55°	315.7	311.8	315.7	319.5	306.1
57.5°	302.2	300.3	306.1	308.0	296.4
60°	288.7	286.8	296.4	296.4	284.9
62.5°	269.5	271.4	283.0	284.9	275.3
65°	250.2	256.0	269.5	273.3	267.6
67.5°	229.1	240.6	256.0	265.6	259.9
70°	206.0	223.3	242.5	256.0	250.2
72.5°	182.9	204.0	231.0	248.3	242.5
75°	155.9	182.9	223.3	240.6	236.8
77.5°	132.8	163.6	213.7	234.8	232.9
80°	103.9	148.2	207.9	229.1	227.1
82.5°	77.0	138.6	204.0	223.3	221.4
85°	53.9	138.6	200.2	215.6	215.6
87.5°	28.9	146.3	196.3	209.8	207.9
90°	0.0	155.9	180.9	179.0	171.3
92.5°	105.9	184.8	192.5	194.4	192.5
95°	198.3	215.6	196.3	194.4	190.6
97.5°	267.6	246.4	200.2	188.6	184.8
100°	327.2	279.1	200.2	184.8	179.0
102.5°	381.1	306.1	204.0	179.0	171.3
105°	417.7	331.1	204.0	175.2	165.5
107.5°	446.6	348.4	204.0	171.3	161.7
110°	463.9	356.1	204.0	167.5	152.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	469.7	356.1	202.1	159.8	148.2
115°	460.1	348.4	200.2	154.0	142.4
117.5°	444.7	338.8	200.2	150.1	136.7
120°	421.6	325.3	198.3	148.2	132.8
122.5°	394.6	308.0	194.4	146.3	130.9
125°	365.7	290.7	188.6	146.3	129.0
127.5°	336.9	271.4	180.9	148.2	130.9
130°	309.9	252.2	173.2	148.2	132.8
132.5°	283.0	232.9	165.5	146.3	132.8
135°	254.1	213.7	161.7	140.5	132.8
137.5°	227.1	196.3	157.8	136.7	127.0
140°	204.0	184.8	154.0	134.7	125.1
142.5°	186.7	175.2	152.1	132.8	123.2
145°	173.2	165.5	150.1	134.7	123.2
147.5°	163.6	159.8	148.2	134.7	123.2
150°	157.8	155.9	146.3	134.7	125.1
152.5°	154.0	152.1	144.4	136.7	127.0
155°	150.1	148.2	142.4	136.7	127.0
157.5°	148.2	146.3	142.4	136.7	129.0
160°	146.3	144.4	142.4	136.7	130.9
162.5°	144.4	144.4	140.5	138.6	130.9
165°	144.4	142.4	140.5	138.6	130.9
167.5°	142.4	142.4	140.5	138.6	132.8
170°	142.4	142.4	140.5	138.6	132.8
172.5°	142.4	142.4	140.5	138.6	132.8
175°	142.4	142.4	140.5	140.5	134.7
177.5°	142.4	142.4	140.5	140.5	134.7
180°	140.5	140.5	140.5	140.5	140.5



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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	10.87	11.91	11.72	12.80	13.93	11.52	12.56	12.37	13.45	14.58
	3H	12.96	13.91	13.83	14.81	15.97	14.29	15.24	15.16	16.14	17.29
	4H	13.75	14.65	14.63	15.56	16.72	15.75	16.65	16.63	17.56	18.72
	6H	14.32	15.17	15.22	16.08	17.25	17.37	18.21	18.27	19.12	20.30
	8H	14.51	15.32	15.41	16.25	17.42	18.24	19.04	19.14	19.98	21.15
	12H	14.63	15.40	15.54	16.33	17.53	19.19	19.96	20.10	20.89	22.09
4H	2H	11.70	12.60	12.58	13.51	14.67	12.18	13.09	13.07	14.00	15.16
	3H	14.04	14.82	14.94	15.75	16.93	15.19	15.96	16.09	16.90	18.08
	4H	15.00	15.72	15.91	16.65	17.85	16.82	17.53	17.73	18.47	19.67
	6H	15.76	16.39	16.68	17.34	18.54	18.63	19.26	19.55	20.22	21.41
	8H	16.03	16.63	16.96	17.58	18.79	19.60	20.20	20.53	21.15	22.36
	12H	16.23	16.77	17.17	17.74	18.96	20.67	21.21	21.61	22.18	23.40
8H	4H	15.72	16.32	16.65	17.27	18.48	17.22	17.82	18.15	18.77	19.98
	6H	16.75	17.26	17.70	18.25	19.46	19.26	19.77	20.21	20.76	21.97
	8H	17.21	17.66	18.17	18.64	19.87	20.41	20.86	21.36	21.84	23.07
	12H	17.58	17.99	18.55	18.96	20.24	21.67	22.08	22.64	23.05	24.33
12H	4H	15.93	16.47	16.88	17.44	18.66	17.26	17.80	18.21	18.77	19.99
	6H	17.13	17.58	18.08	18.56	19.79	19.39	19.84	20.35	20.82	22.05
	8H	17.71	18.12	18.68	19.09	20.37	20.62	21.02	21.58	21.99	23.27