

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: P624696

Luminaire Tested: S930DIP-W427-X2-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624696
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-W427-X2-USTD-W
Description: NEO-RAY COVERA DIRECT/INDIRECT 2-FOOT LED WaveStream LUMINAIRE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

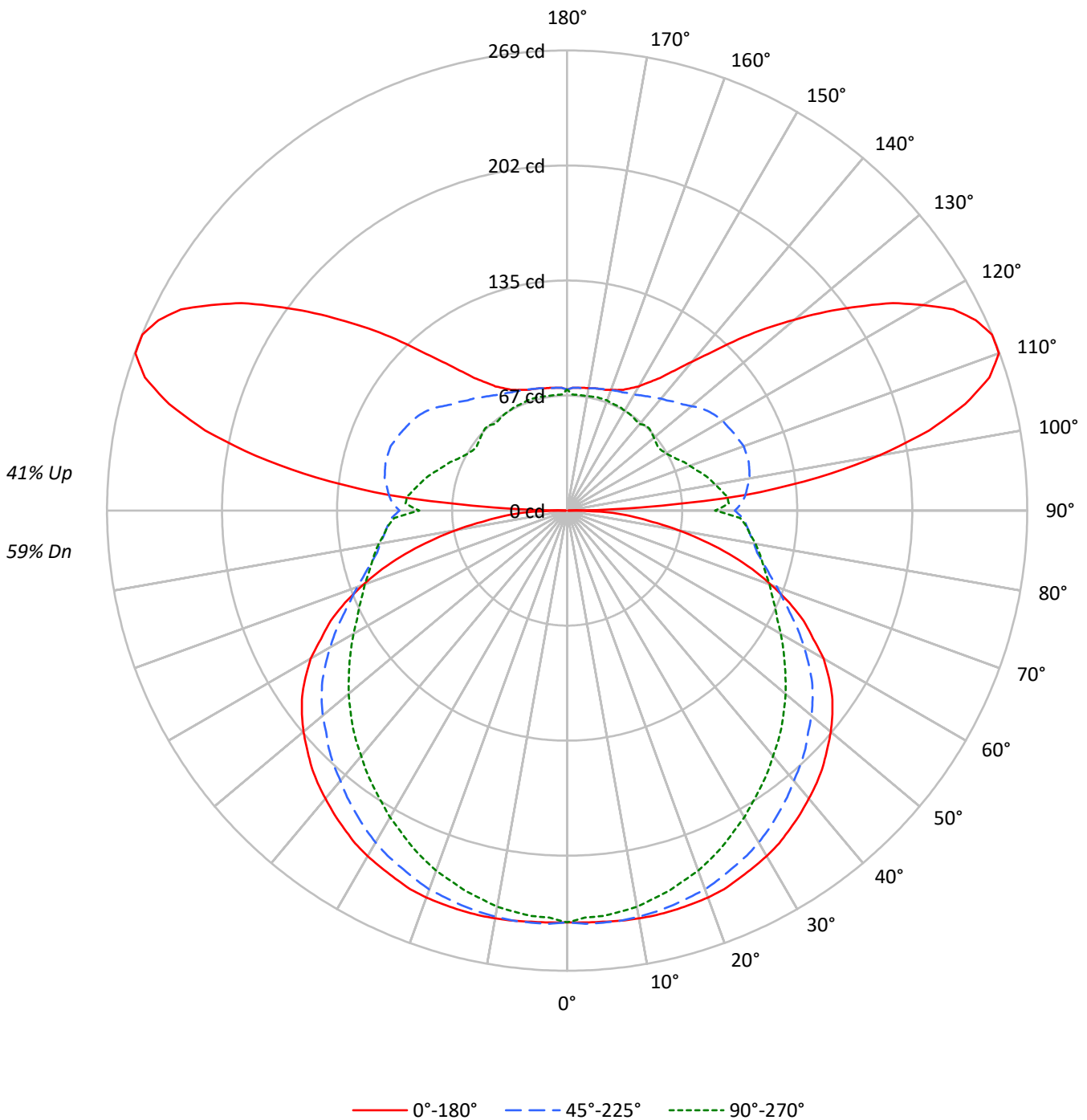
Lumens per Lamp: N/A
Luminaire Lumens: 1692.6 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.28 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1.92' x H: 0.17')
CIE Type: General Diffuse

Input Watts (W): 21.2
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	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°	2028	2028	2028
5°	2025	2003	1969
10°	2040	1978	1927
15°	2061	1958	1881
20°	2092	1944	1841
25°	2121	1925	1798
30°	2160	1915	1760
35°	2201	1901	1727
40°	2253	1890	1703
45°	2318	1895	1692
50°	2389	1904	1683
55°	2472	1915	1681
60°	2535	1908	1695
65°	2562	1905	1740
70°	2523	1943	1837
75°	2408	2043	1992
80°	2151	2286	2245
85°	1823	2739	2636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 4341 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.0	1.4
10°-20°	67.3	4.0
20°-30°	105.7	6.2
30°-40°	134.4	7.9
40°-50°	151.4	8.9
50°-60°	155.0	9.2
60°-70°	143.3	8.5
70°-80°	120.4	7.1
80°-90°	99.5	5.9
90°-100°	114.6	6.8
100°-110°	144.1	8.5
110°-120°	137.0	8.1
120°-130°	107.2	6.3
130°-140°	75.7	4.5
140°-150°	51.6	3.0
150°-160°	34.9	2.1
160°-170°	20.6	1.2
170°-180°	6.8	0.4
0°-30°	195.9	11.6
0°-40°	330.3	19.5
0°-60°	636.7	37.6
0°-90°	1000.0	59.1
90°-120°	395.7	23.4
90°-150°	630.2	37.2
90°-180°	693.0	40.9
0°-180°	1692.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	241	241	241	241	241	
5°	241	242	242	242	238	23
15°	242	241	239	235	230	68
25°	237	235	230	223	216	110
35°	227	223	216	206	197	142
45°	212	205	197	187	178	163
55°	189	182	175	165	155	169
65°	152	150	144	141	134	150
75°	98	105	119	122	118	103
85°	38	81	106	107	105	36
90°	1	91	98	91	86	9
95°	105	127	105	97	94	100
105°	241	190	110	88	82	249
115°	264	201	107	80	71	259
125°	208	165	101	75	65	187
135°	142	119	90	76	68	111
145°	95	90	82	74	67	61
155°	78	78	76	73	68	36
165°	74	74	74	72	68	21
175°	72	72	72	72	68	7
180°	71	71	71	71	71	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	240.7	240.7	240.7	240.7	240.7
2.5°	241.0	241.3	241.8	241.8	238.2
5°	241.3	241.6	241.8	241.6	237.9
7.5°	241.8	241.6	241.8	240.7	236.5
10°	242.1	241.8	241.0	239.6	235.2
12.5°	242.1	241.6	240.2	237.4	232.4
15°	241.8	241.0	238.8	235.4	230.1
17.5°	241.3	240.4	237.1	232.7	226.8
20°	240.7	239.3	235.7	230.4	224.0
22.5°	239.6	237.4	232.9	227.1	220.1
25°	237.4	235.4	230.1	223.2	216.0
27.5°	235.4	232.9	227.4	219.3	211.2
30°	233.2	230.1	224.0	215.1	207.0
32.5°	230.7	227.1	220.1	210.9	202.0
35°	227.1	223.2	215.7	206.5	197.3
37.5°	223.7	219.6	211.2	201.8	192.6
40°	219.8	215.1	206.2	196.5	187.3
42.5°	216.0	210.7	201.8	192.3	182.6
45°	211.5	205.4	197.0	187.0	177.5
47.5°	206.2	200.1	191.2	181.7	172.0
50°	201.2	195.1	186.5	176.2	166.7
52.5°	195.4	189.0	180.9	170.3	160.9
55°	189.2	182.0	174.8	164.7	155.3
57.5°	181.4	175.3	167.5	158.3	149.7
60°	173.1	167.3	160.0	152.2	144.2
62.5°	162.2	158.9	152.5	146.4	138.6
65°	152.5	150.3	144.4	140.8	134.1
67.5°	140.5	141.1	136.9	135.5	129.7
70°	126.9	130.2	130.5	130.8	125.8
72.5°	113.3	118.0	124.1	125.8	121.6
75°	98.0	105.2	118.6	122.2	118.3
77.5°	81.8	93.2	113.8	118.8	115.2
80°	66.2	84.9	110.8	115.2	111.9
82.5°	50.1	80.7	108.0	111.0	108.0
85°	37.6	81.0	105.5	107.4	105.2
87.5°	24.2	84.6	103.0	103.5	101.3
90°	0.6	90.7	98.0	91.0	86.5
92.5°	42.9	108.0	102.4	97.4	94.6
95°	104.9	126.6	104.6	96.6	93.8
97.5°	148.1	145.8	106.3	94.6	90.7
100°	185.1	162.5	108.3	92.9	87.9
102.5°	216.8	177.8	109.1	90.7	85.2
105°	241.0	190.4	109.9	88.5	82.4
107.5°	258.8	199.5	109.9	86.3	79.0
110°	268.6	205.4	109.9	84.0	76.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	268.8	205.4	108.5	81.3	74.0
115°	263.5	201.2	107.4	79.6	71.0
117.5°	254.6	194.5	106.0	77.1	68.7
120°	240.2	186.2	104.9	75.7	66.8
122.5°	225.7	175.9	103.2	75.1	65.4
125°	207.9	165.0	101.0	74.9	64.8
127.5°	190.9	153.6	98.5	75.1	65.4
130°	173.7	142.2	94.9	76.0	66.2
132.5°	157.5	129.7	91.8	76.3	67.1
135°	141.6	119.4	89.9	75.7	67.9
137.5°	125.8	109.9	87.1	74.0	67.6
140°	113.5	102.1	85.4	73.5	66.0
142.5°	103.2	95.5	83.2	73.7	66.2
145°	94.6	90.4	81.5	73.7	66.8
147.5°	88.8	86.3	79.9	73.7	67.3
150°	83.8	82.7	78.2	73.5	67.3
152.5°	80.7	80.1	77.4	73.5	67.9
155°	77.9	77.9	76.3	73.2	67.9
157.5°	76.3	76.3	75.7	72.9	67.9
160°	75.1	75.4	74.9	72.9	68.5
162.5°	74.0	74.3	74.3	72.6	68.5
165°	73.7	73.7	73.7	72.4	68.5
167.5°	73.2	73.2	73.2	72.1	68.2
170°	72.6	72.6	72.6	71.8	67.9
172.5°	72.4	72.1	72.1	71.5	67.9
175°	72.1	72.1	72.1	71.5	67.9
177.5°	71.8	71.8	71.8	71.2	67.9
180°	70.7	70.7	70.7	70.7	70.7



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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	11.61	12.65	12.47	13.54	14.67	11.25	12.29	12.10	13.18	14.31
	3H	13.79	14.74	14.66	15.64	16.79	13.90	14.85	14.77	15.75	16.91
	4H	14.62	15.52	15.50	16.43	17.59	15.27	16.18	16.15	17.08	18.24
	6H	15.24	16.08	16.13	16.99	18.17	16.75	17.60	17.65	18.51	19.69
	8H	15.45	16.26	16.35	17.19	18.36	17.52	18.33	18.43	19.26	20.44
	12H	15.60	16.37	16.51	17.30	18.50	18.34	19.11	19.25	20.04	21.24
4H	2H	12.26	13.17	13.15	14.08	15.24	11.99	12.89	12.88	13.80	14.96
	3H	14.70	15.47	15.60	16.41	17.59	14.87	15.64	15.76	16.58	17.75
	4H	15.70	16.41	16.61	17.35	18.55	16.40	17.11	17.31	18.05	19.25
	6H	16.50	17.13	17.42	18.09	19.28	18.06	18.69	18.98	19.65	20.84
	8H	16.81	17.40	17.73	18.35	19.57	18.93	19.52	19.85	20.47	21.69
	12H	17.05	17.59	17.99	18.56	19.78	19.86	20.40	20.80	21.37	22.59
8H	4H	16.26	16.86	17.19	17.81	19.02	16.85	17.45	17.78	18.40	19.62
	6H	17.32	17.83	18.27	18.82	20.03	18.74	19.25	19.70	20.24	21.45
	8H	17.81	18.26	18.77	19.24	20.47	19.78	20.23	20.74	21.21	22.44
	12H	18.23	18.63	19.19	19.61	20.88	20.90	21.31	21.87	22.28	23.56
12H	4H	16.41	16.95	17.35	17.92	19.14	16.91	17.45	17.86	18.42	19.64
	6H	17.61	18.06	18.57	19.04	20.27	18.89	19.35	19.85	20.33	21.56
	8H	18.21	18.61	19.17	19.59	20.87	20.02	20.42	20.98	21.39	22.67