

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: P624656

Luminaire Tested: S930DIP-W135-X2-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624656
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-W135-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

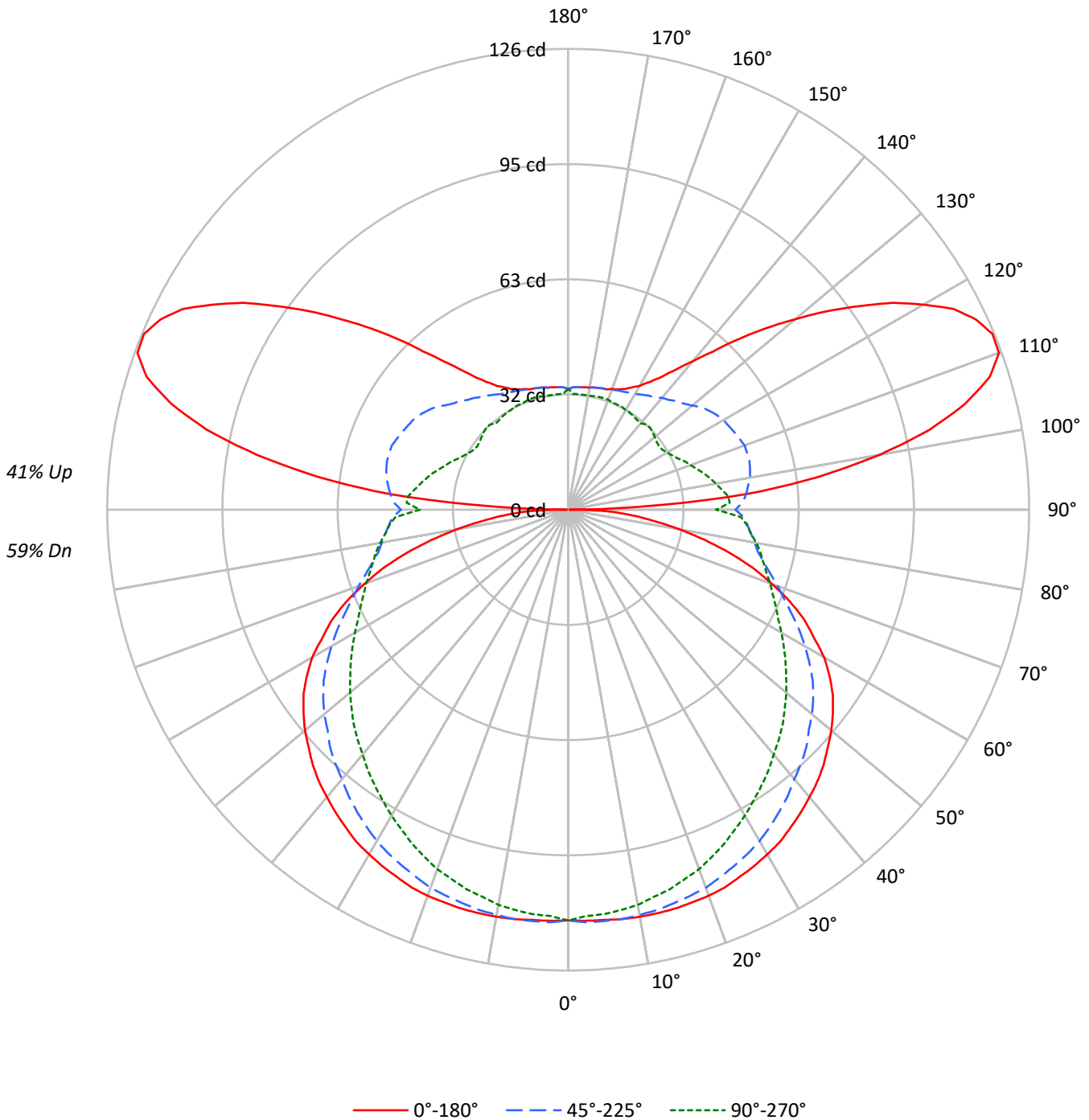
Lumens per Lamp: N/A
Luminaire Lumens: 790.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.45 / 1.28 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1.92' x H: 0.17')
CIE Type: General Diffuse

Input Watts (W): 7.7
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										
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°	946	946	946
5°	945	935	919
10°	952	924	899
15°	962	913	878
20°	976	907	859
25°	990	898	839
30°	1008	894	821
35°	1028	888	806
40°	1052	882	794
45°	1082	885	790
50°	1115	888	786
55°	1154	894	785
60°	1183	891	791
65°	1196	889	812
70°	1177	907	857
75°	1123	953	929
80°	1004	1067	1047
85°	848	1277	1230

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 2025 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.7	1.4
10°-20°	31.4	4.0
20°-30°	49.3	6.2
30°-40°	62.7	7.9
40°-50°	70.6	8.9
50°-60°	72.4	9.2
60°-70°	66.9	8.5
70°-80°	56.2	7.1
80°-90°	46.4	5.9
90°-100°	53.5	6.8
100°-110°	67.2	8.5
110°-120°	64.0	8.1
120°-130°	50.1	6.3
130°-140°	35.3	4.5
140°-150°	24.1	3.1
150°-160°	16.3	2.1
160°-170°	9.6	1.2
170°-180°	3.2	0.4
0°-30°	91.4	11.6
0°-40°	154.2	19.5
0°-60°	297.2	37.6
0°-90°	466.7	59.1
90°-120°	184.7	23.4
90°-150°	294.2	37.2
90°-180°	323.0	40.9
0°-180°	790.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	112	112	112	112	112	
5°	113	113	113	113	111	11
15°	113	112	111	110	107	32
25°	111	110	107	104	101	51
35°	106	104	101	96	92	66
45°	99	96	92	87	83	76
55°	88	85	82	77	72	79
65°	71	70	67	66	63	70
75°	46	49	55	57	55	48
85°	18	38	49	50	49	17
90°	0	42	46	42	40	4
95°	49	59	49	45	44	47
105°	112	89	51	41	38	116
115°	123	94	50	37	33	121
125°	97	77	47	35	30	87
135°	66	56	42	35	32	52
145°	44	42	38	34	31	28
155°	36	36	36	34	32	17
165°	34	34	34	34	32	10
175°	34	34	34	33	32	3
180°	33	33	33	33	33	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	112.3	112.3	112.3	112.3	112.3
2.5°	112.5	112.6	112.9	112.9	111.2
5°	112.6	112.7	112.9	112.7	111.0
7.5°	112.9	112.7	112.9	112.3	110.4
10°	113.0	112.9	112.5	111.8	109.7
12.5°	113.0	112.7	112.1	110.8	108.4
15°	112.9	112.5	111.4	109.9	107.4
17.5°	112.6	112.2	110.7	108.6	105.9
20°	112.3	111.7	110.0	107.5	104.6
22.5°	111.8	110.8	108.7	106.0	102.7
25°	110.8	109.9	107.4	104.2	100.8
27.5°	109.9	108.7	106.1	102.3	98.6
30°	108.8	107.4	104.6	100.4	96.6
32.5°	107.7	106.0	102.7	98.4	94.3
35°	106.0	104.2	100.7	96.4	92.1
37.5°	104.4	102.5	98.6	94.2	89.9
40°	102.6	100.4	96.2	91.7	87.4
42.5°	100.8	98.3	94.2	89.7	85.2
45°	98.7	95.9	92.0	87.3	82.9
47.5°	96.2	93.4	89.2	84.8	80.3
50°	93.9	91.0	87.0	82.2	77.8
52.5°	91.2	88.2	84.4	79.5	75.1
55°	88.3	84.9	81.6	76.9	72.5
57.5°	84.7	81.8	78.2	73.9	69.9
60°	80.8	78.1	74.7	71.0	67.3
62.5°	75.7	74.2	71.2	68.3	64.7
65°	71.2	70.1	67.4	65.7	62.6
67.5°	65.6	65.8	63.9	63.3	60.5
70°	59.2	60.8	60.9	61.0	58.7
72.5°	52.9	55.1	57.9	58.7	56.8
75°	45.7	49.1	55.3	57.0	55.2
77.5°	38.2	43.5	53.1	55.5	53.8
80°	30.9	39.6	51.7	53.8	52.2
82.5°	23.4	37.7	50.4	51.8	50.4
85°	17.5	37.8	49.2	50.1	49.1
87.5°	11.3	39.5	48.1	48.3	47.3
90°	0.3	42.3	45.7	42.5	40.4
92.5°	20.0	50.4	47.8	45.5	44.2
95°	49.0	59.1	48.8	45.1	43.8
97.5°	69.1	68.1	49.6	44.2	42.3
100°	86.4	75.8	50.5	43.4	41.0
102.5°	101.2	83.0	50.9	42.3	39.7
105°	112.5	88.8	51.3	41.3	38.4
107.5°	120.8	93.1	51.3	40.3	36.9
110°	125.3	95.9	51.3	39.2	35.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	125.5	95.9	50.7	37.9	34.5
115°	123.0	93.9	50.1	37.1	33.1
117.5°	118.8	90.8	49.5	36.0	32.1
120°	112.1	86.9	49.0	35.3	31.2
122.5°	105.3	82.1	48.2	35.1	30.5
125°	97.0	77.0	47.1	34.9	30.3
127.5°	89.1	71.7	46.0	35.1	30.5
130°	81.0	66.4	44.3	35.5	30.9
132.5°	73.5	60.5	42.9	35.6	31.3
135°	66.1	55.7	42.0	35.3	31.7
137.5°	58.7	51.3	40.7	34.5	31.6
140°	53.0	47.7	39.9	34.3	30.8
142.5°	48.2	44.5	38.8	34.4	30.9
145°	44.2	42.2	38.1	34.4	31.2
147.5°	41.4	40.3	37.3	34.4	31.4
150°	39.1	38.6	36.5	34.3	31.4
152.5°	37.7	37.4	36.1	34.3	31.7
155°	36.4	36.4	35.6	34.2	31.7
157.5°	35.6	35.6	35.3	34.0	31.7
160°	35.1	35.2	34.9	34.0	32.0
162.5°	34.5	34.7	34.7	33.9	32.0
165°	34.4	34.4	34.4	33.8	32.0
167.5°	34.2	34.2	34.2	33.6	31.8
170°	33.9	33.9	33.9	33.5	31.7
172.5°	33.8	33.6	33.6	33.4	31.7
175°	33.6	33.6	33.6	33.4	31.7
177.5°	33.5	33.5	33.5	33.2	31.7
180°	33.0	33.0	33.0	33.0	33.0



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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	8.96	10.00	9.82	10.90	12.02	8.60	9.64	9.46	10.53	11.66
	3H	11.14	12.09	12.01	12.99	14.15	11.25	12.20	12.12	13.10	14.26
	4H	11.97	12.87	12.85	13.78	14.94	12.62	13.53	13.51	14.43	15.60
	6H	12.59	13.43	13.48	14.34	15.52	14.11	14.95	15.00	15.86	17.04
	8H	12.80	13.61	13.70	14.54	15.71	14.87	15.68	15.78	16.61	17.79
	12H	12.95	13.72	13.86	14.65	15.85	15.69	16.46	16.61	17.39	18.59
4H	2H	9.62	10.52	10.50	11.43	12.59	9.34	10.25	10.23	11.15	12.32
	3H	12.05	12.83	12.95	13.76	14.94	12.22	12.99	13.12	13.93	15.11
	4H	13.05	13.77	13.96	14.70	15.90	13.75	14.46	14.66	15.40	16.60
	6H	13.85	14.48	14.77	15.44	16.64	15.41	16.04	16.33	17.00	18.20
	8H	14.16	14.75	15.09	15.70	16.92	16.28	16.87	17.21	17.82	19.04
	12H	14.40	14.94	15.34	15.91	17.13	17.21	17.75	18.15	18.72	19.94
8H	4H	13.61	14.21	14.54	15.16	16.37	14.20	14.80	15.13	15.75	16.97
	6H	14.67	15.18	15.62	16.17	17.38	16.10	16.60	17.05	17.59	18.80
	8H	15.16	15.61	16.12	16.59	17.82	17.13	17.58	18.09	18.56	19.80
	12H	15.58	15.98	16.54	16.96	18.23	18.25	18.66	19.22	19.63	20.91
12H	4H	13.76	14.30	14.71	15.27	16.49	14.26	14.80	15.21	15.77	16.99
	6H	14.96	15.41	15.92	16.39	17.62	16.24	16.70	17.20	17.68	18.91
	8H	15.56	15.96	16.53	16.94	18.22	17.37	17.77	18.33	18.74	20.02