

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: P624680

Luminaire Tested: S930DIP-W327-X2-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624680
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-W327-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

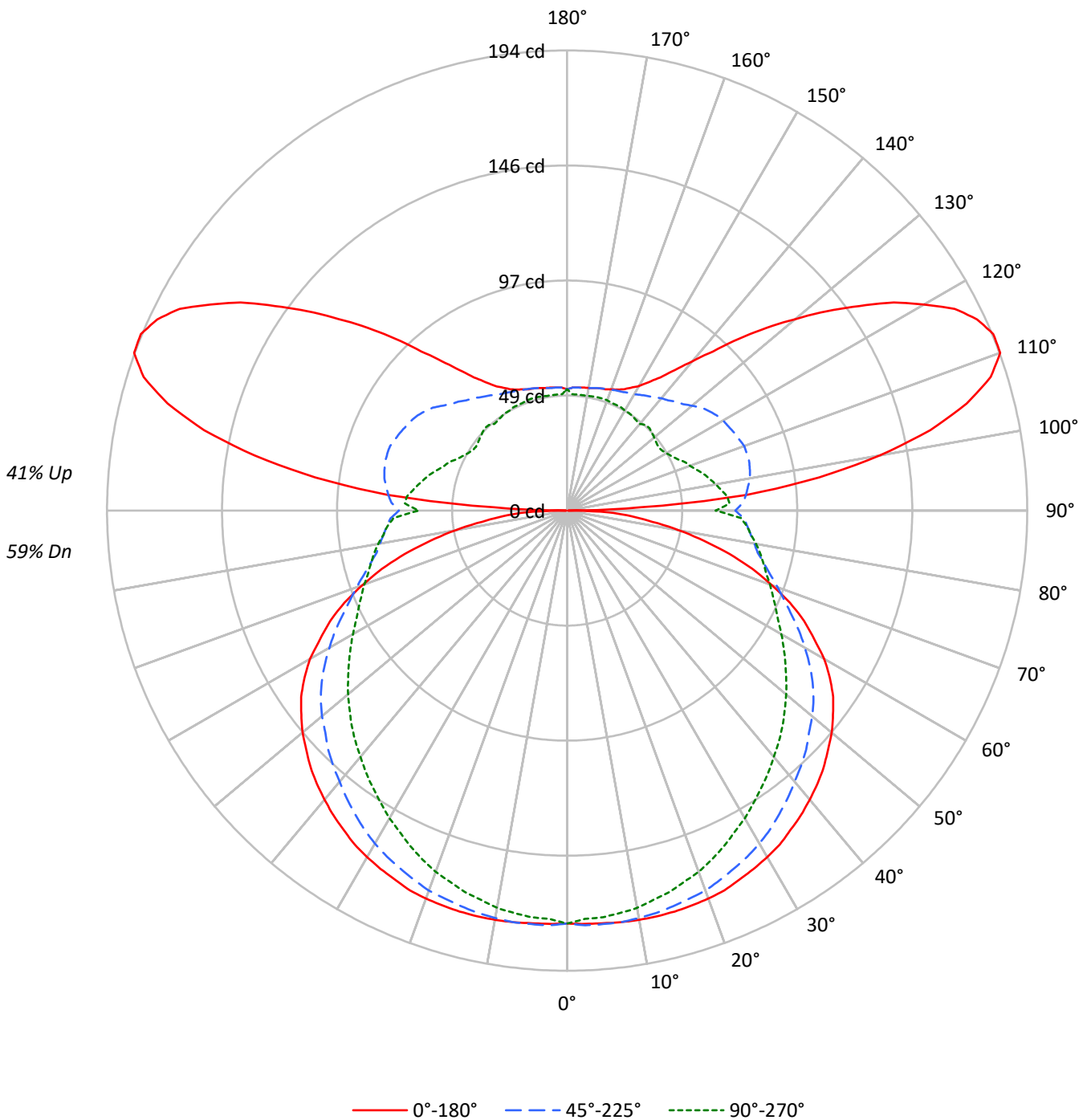
Lumens per Lamp: N/A
Luminaire Lumens: 1224.5 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.45 / 1.28 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1.92' x H: 0.17')
CIE Type: General Diffuse

Input Watts (W): 15.7
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				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	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°	1467	1467	1467
5°	1465	1450	1424
10°	1476	1432	1394
15°	1491	1416	1361
20°	1513	1406	1332
25°	1534	1393	1300
30°	1563	1386	1273
35°	1593	1375	1249
40°	1631	1367	1232
45°	1677	1371	1224
50°	1729	1377	1218
55°	1788	1385	1215
60°	1833	1381	1226
65°	1853	1379	1259
70°	1825	1405	1329
75°	1742	1478	1441
80°	1556	1653	1623
85°	1318	1981	1907

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 3140 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	16.6	1.4
10°-20°	48.7	4.0
20°-30°	76.5	6.2
30°-40°	97.2	7.9
40°-50°	109.5	8.9
50°-60°	112.2	9.2
60°-70°	103.7	8.5
70°-80°	87.1	7.1
80°-90°	72.0	5.9
90°-100°	82.9	6.8
100°-110°	104.2	8.5
110°-120°	99.1	8.1
120°-130°	77.6	6.3
130°-140°	54.8	4.5
140°-150°	37.4	3.1
150°-160°	25.3	2.1
160°-170°	14.9	1.2
170°-180°	4.9	0.4
0°-30°	141.7	11.6
0°-40°	239.0	19.5
0°-60°	460.6	37.6
0°-90°	723.4	59.1
90°-120°	286.3	23.4
90°-150°	456.0	37.2
90°-180°	501.0	40.9
0°-180°	1224.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	174	174	174	174	174	
5°	175	175	175	175	172	17
15°	175	174	173	170	166	50
25°	172	170	166	162	156	79
35°	164	162	156	149	143	103
45°	153	149	142	135	128	118
55°	137	132	126	119	112	122
65°	110	109	104	102	97	108
75°	71	76	86	88	86	74
85°	27	59	76	78	76	26
90°	0	66	71	66	63	7
95°	76	92	76	70	68	72
105°	174	138	80	64	60	180
115°	191	146	78	58	51	187
125°	150	119	73	54	47	135
135°	102	86	65	55	49	80
145°	68	65	59	53	48	44
155°	56	56	55	53	49	26
165°	53	53	53	52	50	15
175°	52	52	52	52	49	5
180°	51	51	51	51	51	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	174.1	174.1	174.1	174.1	174.1
2.5°	174.4	174.6	175.0	175.0	172.3
5°	174.6	174.8	175.0	174.8	172.1
7.5°	175.0	174.8	175.0	174.1	171.1
10°	175.2	175.0	174.4	173.3	170.1
12.5°	175.2	174.8	173.7	171.7	168.1
15°	175.0	174.4	172.7	170.3	166.5
17.5°	174.6	173.9	171.5	168.3	164.1
20°	174.1	173.1	170.5	166.7	162.1
22.5°	173.3	171.7	168.5	164.3	159.3
25°	171.7	170.3	166.5	161.5	156.2
27.5°	170.3	168.5	164.5	158.6	152.8
30°	168.7	166.5	162.1	155.6	149.8
32.5°	166.9	164.3	159.3	152.6	146.2
35°	164.3	161.5	156.0	149.4	142.7
37.5°	161.9	158.8	152.8	146.0	139.3
40°	159.1	155.6	149.2	142.1	135.5
42.5°	156.2	152.4	146.0	139.1	132.1
45°	153.0	148.6	142.5	135.3	128.4
47.5°	149.2	144.8	138.3	131.5	124.4
50°	145.6	141.1	134.9	127.4	120.6
52.5°	141.3	136.7	130.9	123.2	116.4
55°	136.9	131.7	126.4	119.2	112.3
57.5°	131.3	126.8	121.2	114.6	108.3
60°	125.2	121.0	115.8	110.1	104.3
62.5°	117.4	115.0	110.3	105.9	100.3
65°	110.3	108.7	104.5	101.9	97.0
67.5°	101.7	102.1	99.1	98.0	93.8
70°	91.8	94.2	94.4	94.6	91.0
72.5°	81.9	85.4	89.8	91.0	88.0
75°	70.9	76.1	85.8	88.4	85.6
77.5°	59.2	67.4	82.3	86.0	83.4
80°	47.9	61.4	80.1	83.4	80.9
82.5°	36.2	58.4	78.1	80.3	78.1
85°	27.2	58.6	76.3	77.7	76.1
87.5°	17.5	61.2	74.5	74.9	73.3
90°	0.4	65.6	70.9	65.8	62.6
92.5°	31.0	78.1	74.1	70.5	68.5
95°	75.9	91.6	75.7	69.9	67.8
97.5°	107.1	105.5	76.9	68.5	65.6
100°	133.9	117.6	78.3	67.2	63.6
102.5°	156.8	128.6	78.9	65.6	61.6
105°	174.4	137.7	79.5	64.0	59.6
107.5°	187.2	144.4	79.5	62.4	57.2
110°	194.3	148.6	79.5	60.8	55.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	194.5	148.6	78.5	58.8	53.6
115°	190.7	145.6	77.7	57.6	51.3
117.5°	184.2	140.7	76.7	55.8	49.7
120°	173.7	134.7	75.9	54.8	48.3
122.5°	163.3	127.2	74.7	54.4	47.3
125°	150.4	119.4	73.1	54.2	46.9
127.5°	138.1	111.1	71.3	54.4	47.3
130°	125.6	102.9	68.7	55.0	47.9
132.5°	114.0	93.8	66.4	55.2	48.5
135°	102.5	86.4	65.0	54.8	49.1
137.5°	91.0	79.5	63.0	53.6	48.9
140°	82.1	73.9	61.8	53.2	47.7
142.5°	74.7	69.1	60.2	53.4	47.9
145°	68.5	65.4	59.0	53.4	48.3
147.5°	64.2	62.4	57.8	53.4	48.7
150°	60.6	59.8	56.6	53.2	48.7
152.5°	58.4	58.0	56.0	53.2	49.1
155°	56.4	56.4	55.2	52.9	49.1
157.5°	55.2	55.2	54.8	52.7	49.1
160°	54.4	54.6	54.2	52.7	49.5
162.5°	53.6	53.8	53.8	52.5	49.5
165°	53.4	53.4	53.4	52.3	49.5
167.5°	52.9	52.9	52.9	52.1	49.3
170°	52.5	52.5	52.5	51.9	49.1
172.5°	52.3	52.1	52.1	51.7	49.1
175°	52.1	52.1	52.1	51.7	49.1
177.5°	51.9	51.9	51.9	51.5	49.1
180°	51.1	51.1	51.1	51.1	51.1



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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	10.49	11.53	11.34	12.42	13.55	10.12	11.16	10.98	12.06	13.18
	3H	12.67	13.62	13.53	14.52	15.67	12.78	13.73	13.64	14.63	15.78
	4H	13.49	14.40	14.38	15.30	16.47	14.15	15.05	15.03	15.96	17.12
	6H	14.11	14.95	15.01	15.87	17.04	15.63	16.47	16.52	17.38	18.56
	8H	14.32	15.13	15.23	16.06	17.24	16.40	17.20	17.30	18.14	19.31
	12H	14.48	15.25	15.39	16.17	17.38	17.22	17.99	18.13	18.91	20.12
4H	2H	11.14	12.04	12.03	12.95	14.11	10.86	11.77	11.75	12.68	13.84
	3H	13.57	14.35	14.47	15.28	16.46	13.74	14.52	14.64	15.45	16.63
	4H	14.57	15.29	15.48	16.22	17.42	15.27	15.99	16.18	16.92	18.12
	6H	15.37	16.00	16.30	16.96	18.16	16.93	17.56	17.86	18.52	19.72
	8H	15.68	16.28	16.61	17.23	18.45	17.81	18.40	18.73	19.35	20.57
	12H	15.92	16.46	16.87	17.43	18.65	18.73	19.27	19.68	20.24	21.46
8H	4H	15.14	15.73	16.06	16.68	17.90	15.73	16.32	16.65	17.27	18.49
	6H	16.20	16.70	17.15	17.69	18.90	17.62	18.12	18.57	19.11	20.33
	8H	16.68	17.13	17.64	18.11	19.34	18.66	19.11	19.61	20.09	21.32
	12H	17.10	17.51	18.07	18.48	19.76	19.78	20.18	20.74	21.15	22.43
12H	4H	15.28	15.82	16.23	16.79	18.02	15.78	16.33	16.73	17.29	18.52
	6H	16.48	16.93	17.44	17.91	19.14	17.77	18.22	18.73	19.20	20.43
	8H	17.08	17.49	18.05	18.46	19.74	18.89	19.29	19.85	20.27	21.54