

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: P624702

Luminaire Tested: S930DIP-W430-X4-USTD-W

Issue Date: 11/3/2022

Test Information

Test Method: LM-79-2019
Report Number: P624702
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-W430-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

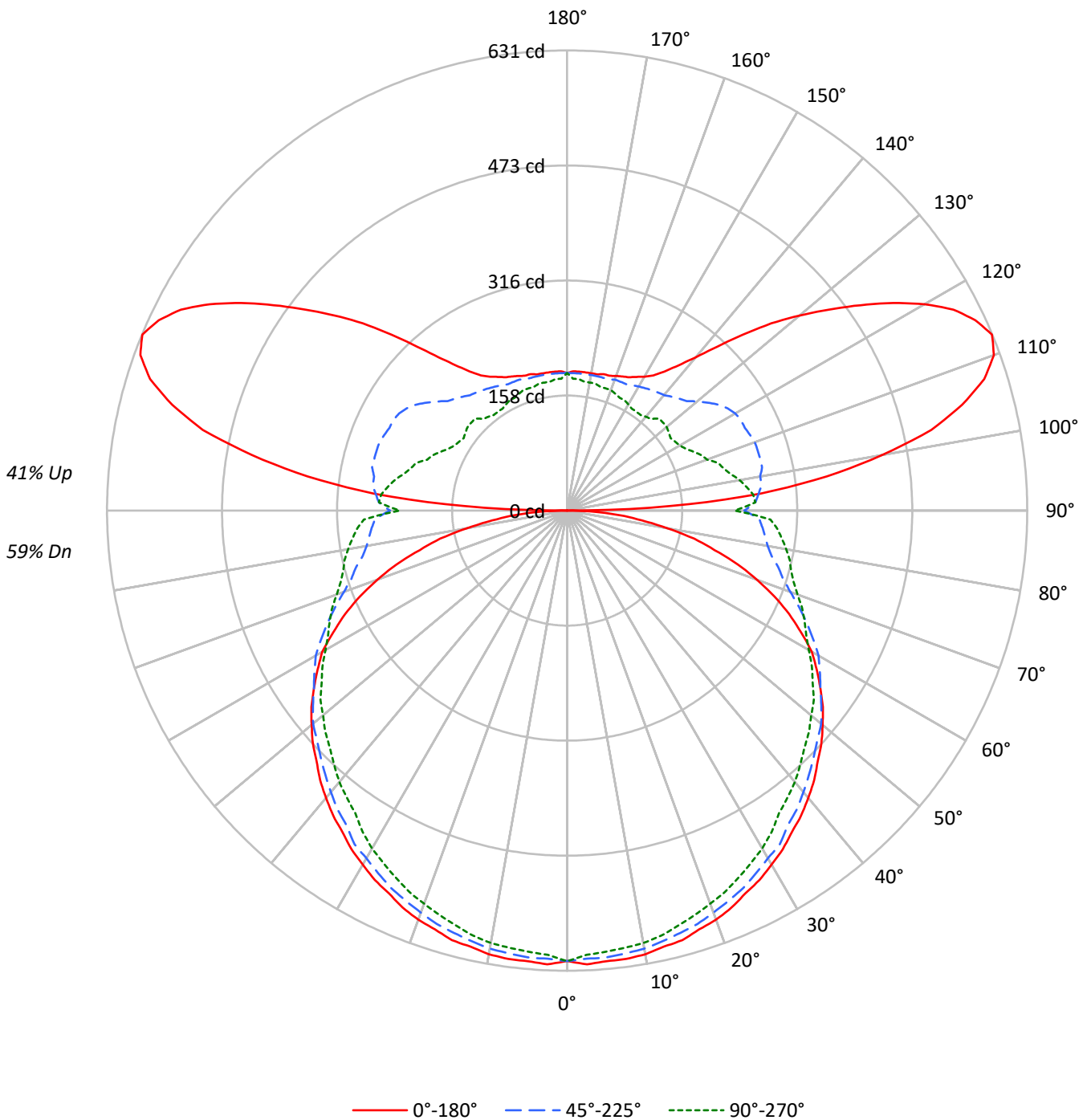
Lumens per Lamp: N/A
Luminaire Lumens: 4182.8 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.35 / 1.29 / 1.48
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 3.83' x H: 0.17')
CIE Type: General Diffuse

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										
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	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°	2602	2602	2602
5°	2612	2554	2513
10°	2622	2516	2467
15°	2629	2477	2408
20°	2634	2445	2357
25°	2637	2420	2313
30°	2661	2391	2274
35°	2682	2367	2216
40°	2728	2360	2208
45°	2774	2358	2192
50°	2850	2389	2205
55°	2930	2401	2224
60°	3037	2466	2249
65°	3063	2495	2330
70°	3042	2554	2453
75°	2931	2749	2676
80°	2716	3110	3060
85°	2337	3852	3626

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 90°
 Luminance: 6490 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	1.4
10°-20°	169.9	4.1
20°-30°	263.5	6.3
30°-40°	330.4	7.9
40°-50°	368.7	8.8
50°-60°	378.3	9.0
60°-70°	352.2	8.4
70°-80°	300.2	7.2
80°-90°	251.8	6.0
90°-100°	287.6	6.9
100°-110°	352.4	8.4
110°-120°	333.6	8.0
120°-130°	263.2	6.3
130°-140°	185.6	4.4
140°-150°	127.2	3.0
150°-160°	88.4	2.1
160°-170°	53.3	1.3
170°-180°	18.0	0.4
0°-30°	492.0	11.8
0°-40°	822.4	19.7
0°-60°	1569.4	37.5
0°-90°	2473.6	59.1
90°-120°	973.6	23.3
90°-150°	1549.5	37.0
90°-180°	1709.0	40.9
0°-180°	4182.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	618	618	618	618	618	
5°	620	620	615	615	607	59
15°	610	607	600	600	589	172
25°	579	576	571	569	556	268
35°	538	532	527	522	506	338
45°	486	481	478	476	460	376
55°	424	419	424	429	411	379
65°	336	344	362	367	359	331
75°	209	246	300	323	318	222
85°	72	186	269	289	289	72
90°	0	209	243	240	230	25
95°	266	289	264	261	256	249
105°	561	444	274	235	222	582
115°	618	468	269	207	191	606
125°	491	390	253	196	173	442
135°	341	287	217	189	178	267
145°	233	222	202	181	165	149
155°	202	199	191	184	171	94
165°	194	191	189	186	176	55
175°	191	191	189	189	181	18
180°	189	189	189	189	189	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	617.7	617.7	617.7	617.7	617.7
2.5°	622.8	620.2	615.1	617.7	609.9
5°	620.2	620.2	615.1	615.1	607.3
7.5°	620.2	617.7	612.5	612.5	604.7
10°	617.7	615.1	609.9	609.9	602.2
12.5°	612.5	612.5	604.7	604.7	597.0
15°	609.9	607.3	599.6	599.6	589.2
17.5°	602.2	599.6	594.4	591.8	581.5
20°	597.0	594.4	586.6	584.1	573.7
22.5°	589.2	586.6	578.9	576.3	566.0
25°	578.9	576.3	571.1	568.6	555.6
27.5°	571.1	568.6	560.8	558.2	545.3
30°	560.8	558.2	550.5	545.3	535.0
32.5°	550.5	545.3	542.7	535.0	522.0
35°	537.5	532.4	527.2	522.0	506.5
37.5°	527.2	522.0	516.9	511.7	496.2
40°	514.3	506.5	503.9	498.8	485.9
42.5°	501.4	493.6	491.0	488.4	472.9
45°	485.9	480.7	478.1	475.5	460.0
47.5°	472.9	465.2	465.2	462.6	449.7
50°	457.4	449.7	454.8	452.3	436.8
52.5°	441.9	436.8	439.3	441.9	426.4
55°	423.8	418.7	423.8	429.0	410.9
57.5°	405.7	403.2	410.9	413.5	398.0
60°	387.7	385.1	398.0	398.0	382.5
62.5°	361.8	364.4	379.9	382.5	369.6
65°	336.0	343.7	361.8	367.0	359.2
67.5°	307.5	323.0	343.7	356.6	348.9
70°	276.5	299.8	325.6	343.7	336.0
72.5°	245.5	273.9	310.1	333.4	325.6
75°	209.3	245.5	299.8	323.0	317.9
77.5°	178.3	219.7	286.9	315.3	312.7
80°	139.6	199.0	279.1	307.5	305.0
82.5°	103.4	186.1	273.9	299.8	297.2
85°	72.4	186.1	268.8	289.4	289.4
87.5°	38.8	196.4	263.6	281.7	279.1
90°	0.0	209.3	242.9	240.3	230.0
92.5°	142.1	248.1	258.4	261.0	258.4
95°	266.2	289.4	263.6	261.0	255.9
97.5°	359.2	330.8	268.8	253.3	248.1
100°	439.3	374.7	268.8	248.1	240.3
102.5°	511.7	410.9	273.9	240.3	230.0
105°	560.8	444.5	273.9	235.2	222.3
107.5°	599.6	467.8	273.9	230.0	217.1
110°	622.8	478.1	273.9	224.8	204.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	630.6	478.1	271.4	214.5	199.0
115°	617.7	467.8	268.8	206.7	191.2
117.5°	597.0	454.8	268.8	201.6	183.5
120°	566.0	436.8	266.2	199.0	178.3
122.5°	529.8	413.5	261.0	196.4	175.7
125°	491.0	390.2	253.3	196.4	173.2
127.5°	452.3	364.4	242.9	199.0	175.7
130°	416.1	338.5	232.6	199.0	178.3
132.5°	379.9	312.7	222.3	196.4	178.3
135°	341.1	286.9	217.1	188.7	178.3
137.5°	305.0	263.6	211.9	183.5	170.6
140°	273.9	248.1	206.7	180.9	168.0
142.5°	250.7	235.2	204.2	178.3	165.4
145°	232.6	222.3	201.6	180.9	165.4
147.5°	219.7	214.5	199.0	180.9	165.4
150°	211.9	209.3	196.4	180.9	168.0
152.5°	206.7	204.2	193.8	183.5	170.6
155°	201.6	199.0	191.2	183.5	170.6
157.5°	199.0	196.4	191.2	183.5	173.2
160°	196.4	193.8	191.2	183.5	175.7
162.5°	193.8	193.8	188.7	186.1	175.7
165°	193.8	191.2	188.7	186.1	175.7
167.5°	191.2	191.2	188.7	186.1	178.3
170°	191.2	191.2	188.7	186.1	178.3
172.5°	191.2	191.2	188.7	186.1	178.3
175°	191.2	191.2	188.7	188.7	180.9
177.5°	191.2	191.2	188.7	188.7	180.9
180°	188.7	188.7	188.7	188.7	188.7



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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	11.89	12.93	12.75	13.82	14.95	12.54	13.58	13.40	14.48	15.60
	3H	13.99	14.94	14.86	15.84	16.99	15.32	16.27	16.18	17.17	18.32
	4H	14.77	15.68	15.65	16.58	17.74	16.77	17.68	17.65	18.58	19.74
	6H	15.35	16.19	16.24	17.10	18.28	18.39	19.24	19.29	20.15	21.32
	8H	15.53	16.34	16.44	17.27	18.45	19.26	20.07	20.16	21.00	22.17
	12H	15.65	16.43	16.56	17.35	18.55	20.21	20.98	21.12	21.91	23.11
4H	2H	12.72	13.63	13.61	14.53	15.69	13.21	14.11	14.09	15.02	16.18
	3H	15.07	15.84	15.96	16.78	17.95	16.21	16.99	17.11	17.92	19.10
	4H	16.03	16.74	16.93	17.67	18.87	17.84	18.56	18.75	19.49	20.69
	6H	16.78	17.41	17.70	18.37	19.57	19.65	20.28	20.57	21.24	22.44
	8H	17.06	17.65	17.98	18.60	19.82	20.63	21.22	21.55	22.17	23.39
	12H	17.25	17.80	18.20	18.76	19.99	21.69	22.23	22.64	23.20	24.42
8H	4H	16.75	17.34	17.67	18.29	19.51	18.25	18.84	19.17	19.79	21.01
	6H	17.78	18.28	18.73	19.27	20.49	20.29	20.79	21.24	21.78	23.00
	8H	18.23	18.69	19.19	19.67	20.90	21.43	21.88	22.39	22.86	24.09
	12H	18.61	19.01	19.57	19.99	21.26	22.70	23.10	23.66	24.08	25.35
12H	4H	16.95	17.50	17.90	18.46	19.69	18.28	18.83	19.23	19.79	21.02
	6H	18.15	18.60	19.11	19.58	20.81	20.41	20.87	21.37	21.85	23.08
	8H	18.74	19.14	19.70	20.12	21.39	21.64	22.04	22.60	23.02	24.29