

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: P333970

Luminaire Tested: S123DP-S340D930-4F0-1E-UDD-D

Issue Date: 3/3/2020

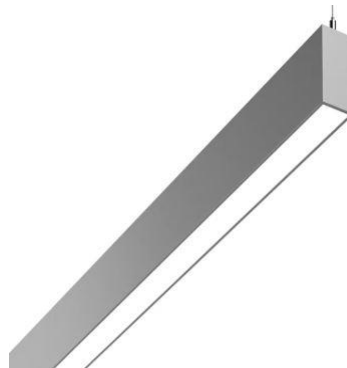
**Test Information**

Test Method: LM-79-2019  
Report Number: P333970  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DP-S340D930-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 340 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

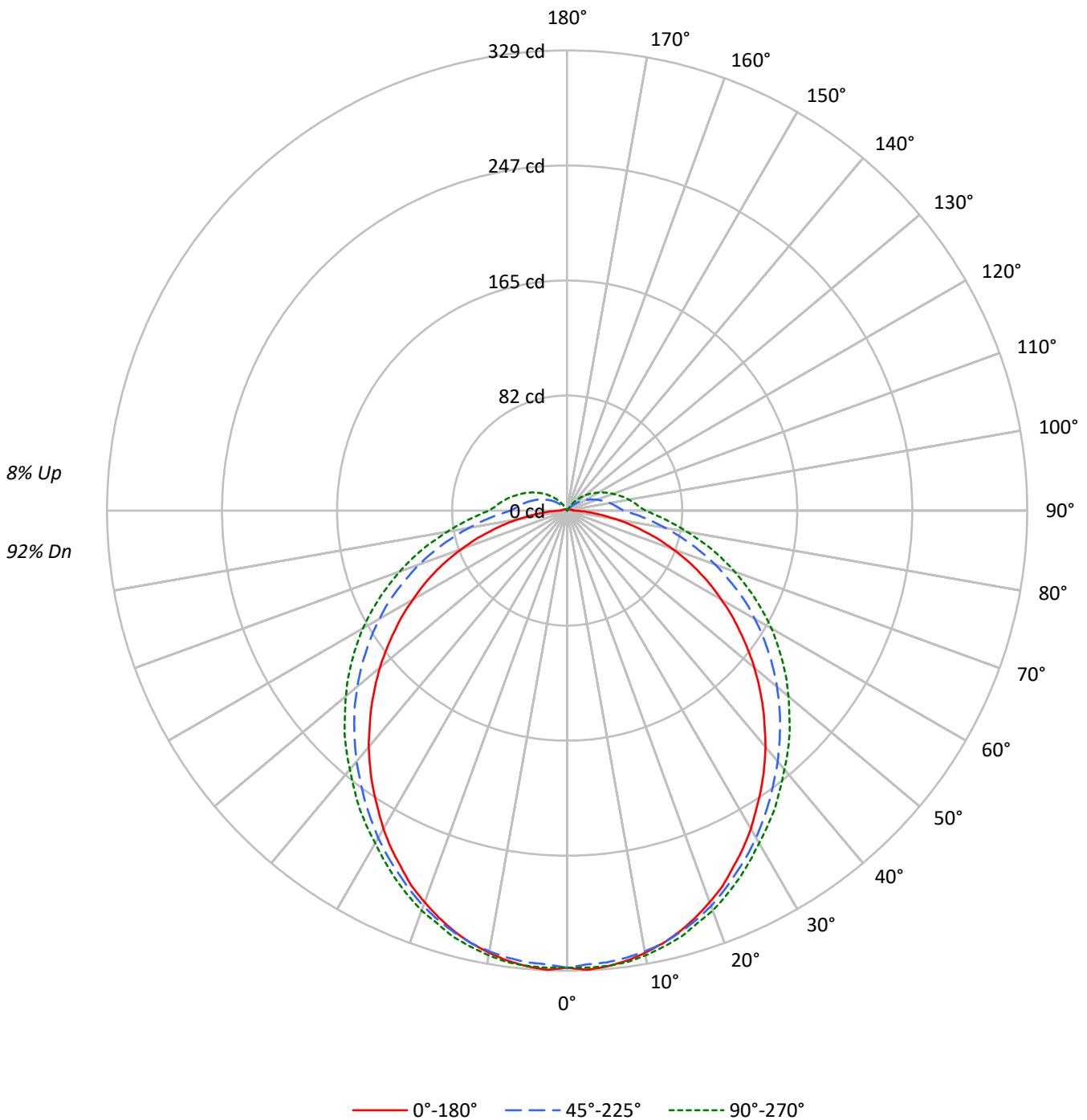
Lumens per Lamp: N/A  
Luminaire Lumens: 1098.3 lumens  
Efficiency: N/A  
Efficacy: 94.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: Direct

Input Watts (W): 11.6  
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	50	30	10	0	
RCR																						
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	94	92	
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	76	76	76	73	
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	63	63	63	60	
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	52	52	52	50	
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	45	45	45	42	
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	39	39	39	36	
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	34	34	34	32	
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	30	30	30	28	
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	27	27	27	25	
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22	
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	22	22	22	20	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3518	3518	3518
5°	3528	3429	3431
10°	3497	3350	3333
15°	3452	3260	3227
20°	3388	3158	3110
25°	3308	3041	2986
30°	3226	2934	2861
35°	3136	2822	2762
40°	3048	2720	2654
45°	2951	2622	2569
50°	2856	2525	2475
55°	2750	2426	2391
60°	2647	2326	2303
65°	2543	2217	2200
70°	2384	2098	2093
75°	2184	1959	1985
80°	1951	1824	1864
85°	1736	1730	1793

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2951 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.0	2.8
10°-20°	88.4	8.0
20°-30°	132.2	12.0
30°-40°	157.8	14.4
40°-50°	165.1	15.0
50°-60°	154.9	14.1
60°-70°	129.4	11.8
70°-80°	92.5	8.4
80°-90°	55.0	5.0
90°-100°	34.6	3.2
100°-110°	25.4	2.3
110°-120°	17.0	1.5
120°-130°	9.7	0.9
130°-140°	4.4	0.4
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	251.5	22.9
0°-40°	409.3	37.3
0°-60°	729.3	66.4
0°-90°	1006.3	91.6
90°-120°	77.0	7.0
90°-150°	92.0	8.4
90°-180°	92.0	8.4
0°-180°	1098.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	327	327	327	327	327	
5°	327	326	324	327	327	31
15°	312	312	312	316	315	88
25°	281	285	286	290	290	130
35°	242	248	252	258	259	151
45°	198	206	215	222	225	153
55°	151	163	176	185	188	135
65°	104	118	134	144	148	103
75°	57	73	91	103	107	60
85°	17	35	54	66	70	18
90°	5	22	40	52	56	3
95°	4	18	35	46	50	3
105°	3	11	27	37	40	3
115°	2	6	19	27	30	2
125°	1	1	11	19	21	1
135°	1	0	4	11	12	1
145°	0	0	0	3	4	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CATALOG NUMBER: S123DP-S340D930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	326.8	326.8	326.8	326.8	326.8
2.5°	328.6	327.5	324.7	327.5	327.1
5°	327.1	326.4	324.3	327.1	326.8
7.5°	324.7	324.7	322.5	326.1	325.7
10°	321.1	321.8	320.0	323.6	322.9
12.5°	316.8	317.9	316.8	320.0	319.3
15°	311.5	312.5	312.2	315.8	315.4
17.5°	305.1	307.2	306.9	310.1	309.3
20°	298.0	300.1	300.8	304.0	304.4
22.5°	290.5	292.6	293.7	298.0	297.6
25°	281.2	284.8	285.9	290.5	290.5
27.5°	272.3	276.2	278.4	282.3	282.6
30°	262.7	267.3	270.2	274.5	274.5
32.5°	252.0	257.4	261.3	265.9	267.0
35°	242.1	247.8	252.4	257.7	259.2
37.5°	231.4	237.8	243.1	249.2	250.3
40°	220.7	227.1	234.2	240.3	241.7
42.5°	209.0	217.1	224.6	231.4	233.5
45°	197.9	206.5	215.4	222.1	225.0
47.5°	186.2	195.8	205.8	213.2	215.4
50°	174.8	184.8	195.8	204.0	206.5
52.5°	162.7	173.4	185.8	194.4	197.6
55°	150.9	162.7	175.5	185.1	188.0
57.5°	139.5	151.6	165.5	175.1	178.3
60°	127.4	140.3	154.9	164.8	168.7
62.5°	116.0	129.2	144.9	154.9	158.4
65°	104.3	118.2	133.8	144.5	148.1
67.5°	92.6	107.1	122.8	134.6	137.4
70°	80.1	95.4	112.5	123.9	127.4
72.5°	68.7	84.0	101.8	113.6	117.1
75°	56.6	73.3	91.1	102.9	107.1
77.5°	46.3	63.0	80.8	93.3	96.5
80°	35.2	52.7	71.2	83.3	86.9
82.5°	25.6	43.4	62.3	74.4	78.0
85°	17.4	35.2	54.1	66.2	69.8
87.5°	10.7	28.5	46.6	58.7	62.3
90°	4.6	22.1	40.2	52.3	55.9
92.5°	4.3	19.6	37.4	49.1	52.3
95°	3.9	17.8	35.2	46.3	49.8
97.5°	3.6	16.4	33.1	43.8	47.3
100°	3.2	14.6	31.0	41.3	44.9
102.5°	2.8	12.8	28.8	38.8	42.4
105°	2.8	11.4	26.7	36.7	39.9
107.5°	2.5	10.0	24.6	34.2	37.4
110°	2.1	8.5	22.8	32.0	34.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	7.1	20.6	29.5	32.8
115°	1.8	6.1	18.9	27.4	30.3
117.5°	1.8	4.6	16.7	25.3	28.1
120°	1.4	3.2	15.0	23.1	25.6
122.5°	1.4	2.1	13.2	21.0	23.5
125°	1.1	1.1	11.4	18.9	21.4
127.5°	1.1	0.7	9.6	16.7	19.2
130°	1.1	0.7	7.8	14.6	16.7
132.5°	0.7	0.7	6.1	12.5	15.0
135°	0.7	0.4	4.3	10.7	12.5
137.5°	0.7	0.4	2.8	8.5	10.3
140°	0.4	0.4	1.4	6.8	8.5
142.5°	0.4	0.0	0.0	4.6	6.4
145°	0.4	0.0	0.0	2.8	4.3
147.5°	0.0	0.0	0.0	1.1	2.5
150°	0.0	0.0	0.0	0.0	0.7
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)