

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: P333980

Luminaire Tested: S123DP-S340D940-4F0-1E-UDD-D

Issue Date: 3/3/2020

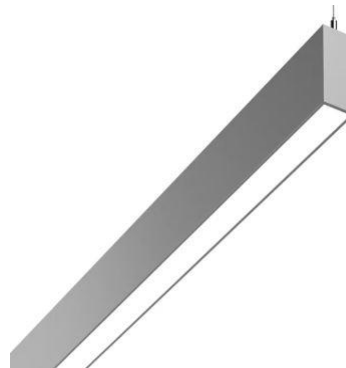
**Test Information**

Test Method: LM-79-2019  
Report Number: P333980  
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-S340D940-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 340 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1201.2 lumens  
Efficiency: N/A  
Efficacy: 103.6 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

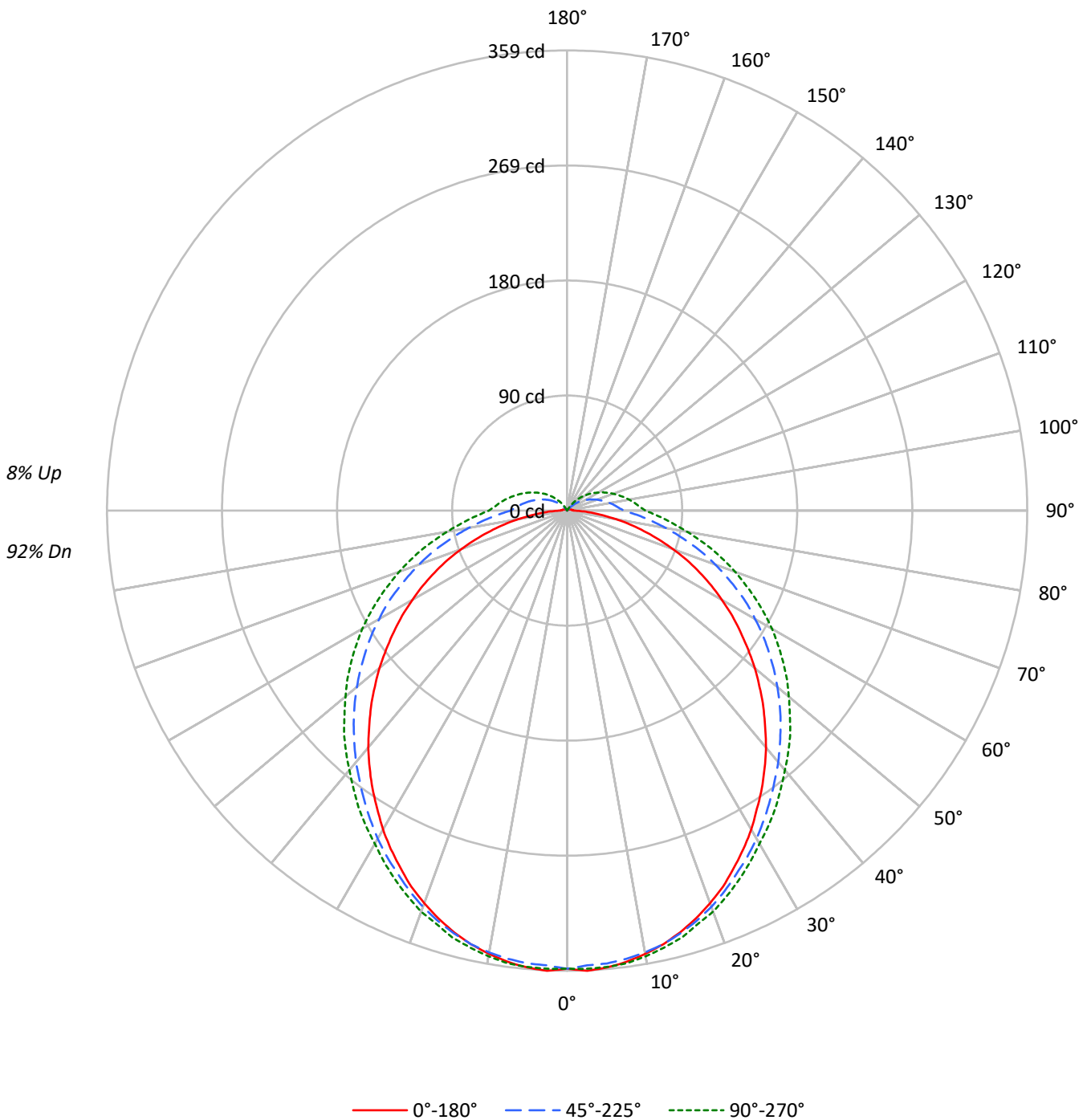
Input Watts (W): 11.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P333980

CATALOG NUMBER: S123DP-S340D940-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P333980

CATALOG NUMBER: S123DP-S340D940-4F0-1E-UDD-D

**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°	3847	3847	3847
5°	3859	3750	3752
10°	3825	3664	3645
15°	3776	3566	3529
20°	3705	3454	3401
25°	3618	3325	3266
30°	3528	3209	3129
35°	3430	3086	3019
40°	3334	2975	2903
45°	3228	2868	2810
50°	3124	2761	2706
55°	3009	2653	2614
60°	2897	2544	2518
65°	2782	2426	2407
70°	2608	2294	2290
75°	2389	2144	2173
80°	2134	1996	2038
85°	1905	1893	1960

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3228 cd/sqm



TEST NUMBER: P333980

CATALOG NUMBER: S123DP-S340D940-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.9	2.8
10°-20°	96.7	8.0
20°-30°	144.5	12.0
30°-40°	172.6	14.4
40°-50°	180.6	15.0
50°-60°	169.4	14.1
60°-70°	141.5	11.8
70°-80°	101.2	8.4
80°-90°	60.2	5.0
90°-100°	37.8	3.1
100°-110°	27.8	2.3
110°-120°	18.6	1.5
120°-130°	10.6	0.9
130°-140°	4.8	0.4
140°-150°	1.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	275.1	22.9
0°-40°	447.7	37.3
0°-60°	797.7	66.4
0°-90°	1100.6	91.6
90°-120°	84.2	7.0
90°-150°	100.6	8.4
90°-180°	101.0	8.4
0°-180°	1201.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	357	357	357	357	357	
5°	358	357	355	358	357	34
15°	341	342	342	345	345	96
25°	308	312	313	318	318	142
35°	265	271	276	282	283	166
45°	216	226	236	243	246	167
55°	165	178	192	202	206	148
65°	114	129	146	158	162	113
75°	62	80	100	112	117	66
85°	19	38	59	72	76	20
90°	5	24	44	57	61	4
95°	4	20	38	51	54	3
105°	3	12	29	40	44	3
115°	2	7	21	30	33	2
125°	1	1	12	21	23	1
135°	1	0	5	12	14	1
145°	0	0	0	3	5	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



TEST NUMBER: P333980

CATALOG NUMBER: S123DP-S340D940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	357.4	357.4	357.4	357.4	357.4
2.5°	359.4	358.2	355.1	358.2	357.8
5°	357.8	357.0	354.7	357.8	357.4
7.5°	355.1	355.1	352.7	356.6	356.2
10°	351.2	352.0	350.0	353.9	353.1
12.5°	346.5	347.7	346.5	350.0	349.2
15°	340.7	341.8	341.5	345.3	345.0
17.5°	333.7	336.0	335.6	339.1	338.3
20°	325.9	328.2	329.0	332.5	332.9
22.5°	317.7	320.0	321.2	325.9	325.5
25°	307.6	311.5	312.6	317.7	317.7
27.5°	297.8	302.1	304.5	308.7	309.1
30°	287.3	292.4	295.5	300.2	300.2
32.5°	275.7	281.5	285.8	290.8	292.0
35°	264.8	271.0	276.0	281.9	283.4
37.5°	253.1	260.1	265.9	272.5	273.7
40°	241.4	248.4	256.2	262.8	264.4
42.5°	228.5	237.5	245.7	253.1	255.4
45°	216.5	225.8	235.6	242.9	246.1
47.5°	203.6	214.1	225.0	233.2	235.6
50°	191.2	202.1	214.1	223.1	225.8
52.5°	177.9	189.6	203.2	212.6	216.1
55°	165.1	177.9	191.9	202.5	205.6
57.5°	152.6	165.9	181.0	191.6	195.1
60°	139.4	153.4	169.4	180.3	184.5
62.5°	126.9	141.3	158.5	169.4	173.3
65°	114.1	129.3	146.4	158.1	162.0
67.5°	101.2	117.2	134.3	147.2	150.3
70°	87.6	104.3	123.0	135.5	139.4
72.5°	75.1	91.9	111.4	124.2	128.1
75°	61.9	80.2	99.7	112.5	117.2
77.5°	50.6	68.9	88.4	102.0	105.5
80°	38.5	57.6	77.9	91.1	95.0
82.5°	28.0	47.5	68.1	81.4	85.3
85°	19.1	38.5	59.2	72.4	76.3
87.5°	11.7	31.1	51.0	64.2	68.1
90°	5.1	24.1	44.0	57.2	61.1
92.5°	4.7	21.4	40.9	53.7	57.2
95°	4.3	19.5	38.5	50.6	54.5
97.5°	3.9	17.9	36.2	47.9	51.8
100°	3.5	16.0	33.9	45.2	49.1
102.5°	3.1	14.0	31.5	42.4	46.3
105°	3.1	12.5	29.2	40.1	43.6
107.5°	2.7	10.9	26.9	37.4	40.9
110°	2.3	9.3	24.9	35.0	38.2



TEST NUMBER: P333980

CATALOG NUMBER: S123DP-S340D940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.3	7.8	22.6	32.3	35.8
115°	1.9	6.6	20.6	30.0	33.1
117.5°	1.9	5.1	18.3	27.6	30.8
120°	1.6	3.5	16.4	25.3	28.0
122.5°	1.6	2.3	14.4	23.0	25.7
125°	1.2	1.2	12.5	20.6	23.4
127.5°	1.2	0.8	10.5	18.3	21.0
130°	1.2	0.8	8.6	16.0	18.3
132.5°	0.8	0.8	6.6	13.6	16.4
135°	0.8	0.4	4.7	11.7	13.6
137.5°	0.8	0.4	3.1	9.3	11.3
140°	0.4	0.4	1.6	7.4	9.3
142.5°	0.4	0.0	0.0	5.1	7.0
145°	0.4	0.0	0.0	3.1	4.7
147.5°	0.0	0.0	0.0	1.2	2.7
150°	0.0	0.0	0.0	0.0	0.8
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)