

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: P333983

Luminaire Tested: S123DP-S1000D940-4F0-1E-UDD-D

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2019
Report Number: P333983
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-S1000D940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1000 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3508.3 lumens
Efficiency: N/A
Efficacy: 100.8 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

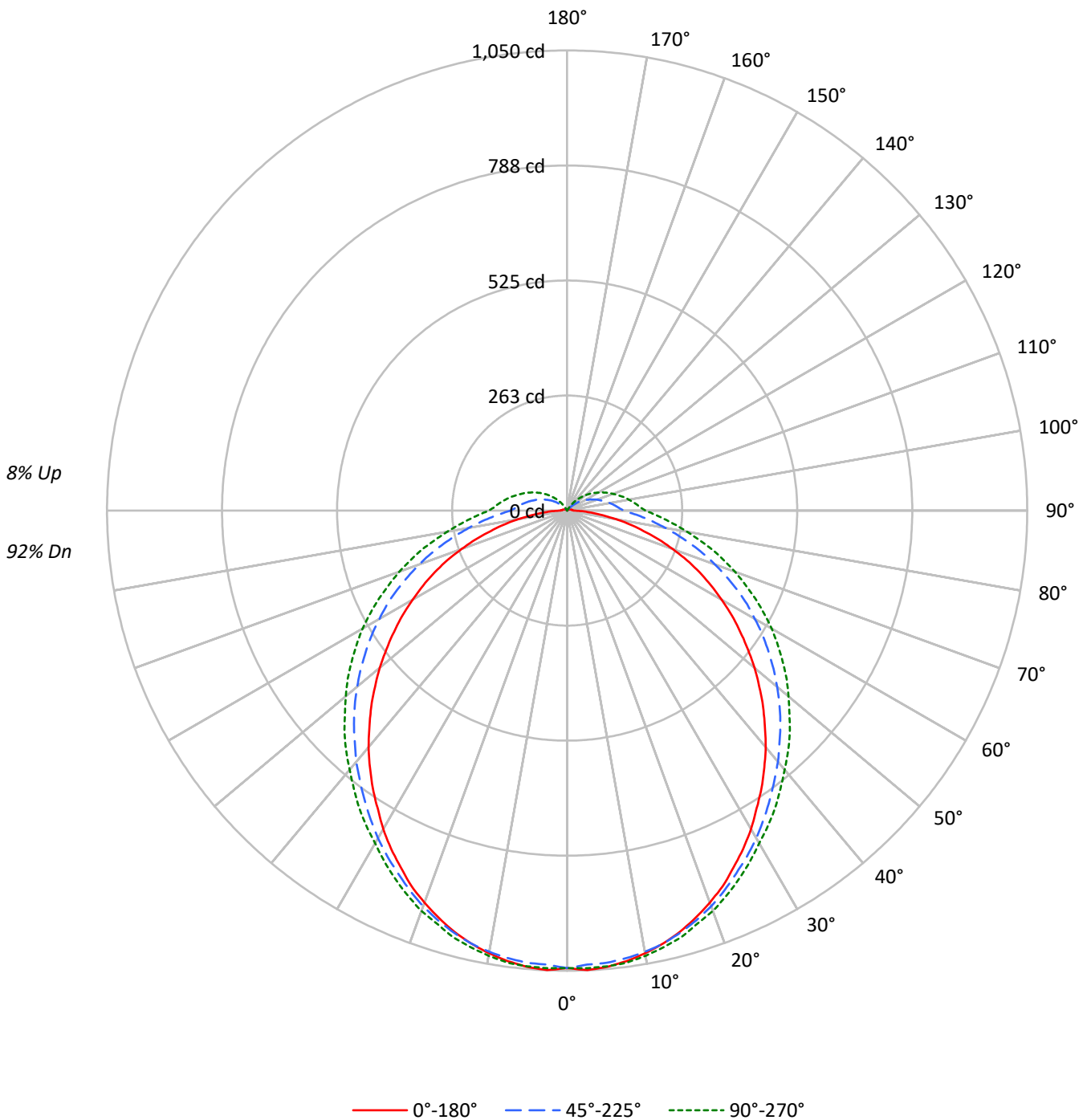
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	11236	11236	11236
5°	11271	10953	10960
10°	11170	10701	10648
15°	11026	10415	10307
20°	10821	10088	9933
25°	10566	9711	9538
30°	10307	9373	9139
35°	10015	9014	8820
40°	9736	8688	8479
45°	9429	8376	8206
50°	9123	8066	7905
55°	8788	7750	7634
60°	8459	7429	7357
65°	8124	7086	7028
70°	7618	6700	6689
75°	6977	6259	6345
80°	6242	5825	5953
85°	5556	5527	5725

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9429 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	2.8
10°-20°	282.3	8.0
20°-30°	422.1	12.0
30°-40°	504.0	14.4
40°-50°	527.4	15.0
50°-60°	494.9	14.1
60°-70°	413.4	11.8
70°-80°	295.6	8.4
80°-90°	175.9	5.0
90°-100°	110.5	3.2
100°-110°	81.2	2.3
110°-120°	54.2	1.5
120°-130°	31.0	0.9
130°-140°	13.9	0.4
140°-150°	2.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	803.5	22.9
0°-40°	1307.5	37.3
0°-60°	2329.8	66.4
0°-90°	3214.6	91.6
90°-120°	246.0	7.0
90°-150°	293.7	8.4
90°-180°	294.0	8.4
0°-180°	3508.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1044	1044	1044	1044	1044	
5°	1045	1043	1036	1045	1044	99
15°	995	998	997	1009	1008	280
25°	898	910	913	928	928	414
35°	773	792	806	823	828	484
45°	632	660	688	710	719	488
55°	482	520	561	591	600	432
65°	333	378	428	462	473	329
75°	181	234	291	329	342	193
85°	56	113	173	212	223	57
90°	15	70	128	167	178	11
95°	12	57	113	148	159	10
105°	9	36	85	117	127	9
115°	6	19	60	88	97	6
125°	3	3	36	60	68	3
135°	2	1	14	34	40	2
145°	1	0	0	9	14	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1043.9	1043.9	1043.9	1043.9	1043.9
2.5°	1049.6	1046.2	1037.1	1046.2	1045.0
5°	1045.0	1042.8	1035.9	1045.0	1043.9
7.5°	1037.1	1037.1	1030.3	1041.6	1040.5
10°	1025.7	1028.0	1022.3	1033.7	1031.4
12.5°	1012.1	1015.5	1012.1	1022.3	1020.0
15°	995.0	998.4	997.3	1008.7	1007.5
17.5°	974.5	981.4	980.2	990.5	988.2
20°	951.8	958.6	960.9	971.1	972.3
22.5°	927.9	934.7	938.1	951.8	950.7
25°	898.3	909.7	913.1	927.9	927.9
27.5°	869.9	882.4	889.3	901.8	902.9
30°	839.2	854.0	863.1	876.7	876.7
32.5°	805.1	822.2	834.7	849.5	852.9
35°	773.3	791.5	806.2	823.3	827.8
37.5°	739.1	759.6	776.7	796.0	799.4
40°	705.0	725.5	748.2	767.6	772.1
42.5°	667.5	693.7	717.5	739.1	746.0
45°	632.3	659.5	688.0	709.6	718.7
47.5°	594.7	625.4	657.3	681.2	688.0
50°	558.3	590.2	625.4	651.6	659.5
52.5°	519.7	553.8	593.6	620.9	631.1
55°	482.2	519.7	560.6	591.3	600.4
57.5°	445.8	484.4	528.8	559.5	569.7
60°	407.1	448.0	494.7	526.5	539.0
62.5°	370.7	412.8	462.8	494.7	506.0
65°	333.2	377.5	427.6	461.7	473.1
67.5°	295.7	342.3	392.3	429.8	438.9
70°	255.9	304.8	359.3	395.7	407.1
72.5°	219.5	268.4	325.2	362.8	374.1
75°	180.8	234.3	291.1	328.6	342.3
77.5°	147.8	201.3	258.1	297.9	308.2
80°	112.6	168.3	227.4	266.1	277.5
82.5°	81.9	138.7	199.0	237.7	249.0
85°	55.7	112.6	172.8	211.5	222.9
87.5°	34.1	91.0	149.0	187.6	199.0
90°	14.8	70.5	128.5	167.2	178.5
92.5°	13.6	62.5	119.4	156.9	167.2
95°	12.5	56.9	112.6	147.8	159.2
97.5°	11.4	52.3	105.8	139.9	151.2
100°	10.2	46.6	98.9	131.9	143.3
102.5°	9.1	40.9	92.1	123.9	135.3
105°	9.1	36.4	85.3	117.1	127.4
107.5°	8.0	31.8	78.5	109.2	119.4
110°	6.8	27.3	72.8	102.3	111.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.8	22.7	66.0	94.4	104.6
115°	5.7	19.3	60.3	87.6	96.7
117.5°	5.7	14.8	53.4	80.7	89.8
120°	4.5	10.2	47.8	73.9	81.9
122.5°	4.5	6.8	42.1	67.1	75.1
125°	3.4	3.4	36.4	60.3	68.2
127.5°	3.4	2.3	30.7	53.4	61.4
130°	3.4	2.3	25.0	46.6	53.4
132.5°	2.3	2.3	19.3	39.8	47.8
135°	2.3	1.1	13.6	34.1	39.8
137.5°	2.3	1.1	9.1	27.3	33.0
140°	1.1	1.1	4.5	21.6	27.3
142.5°	1.1	0.0	0.0	14.8	20.5
145°	1.1	0.0	0.0	9.1	13.6
147.5°	0.0	0.0	0.0	3.4	8.0
150°	0.0	0.0	0.0	0.0	2.3
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)