

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: P333984

Luminaire Tested: S123DP-S1165D940-4F0-1E-UDD-D

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2019
Report Number: P333984
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-S1165D940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1165 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4077.4 lumens
Efficiency: N/A
Efficacy: 99.2 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

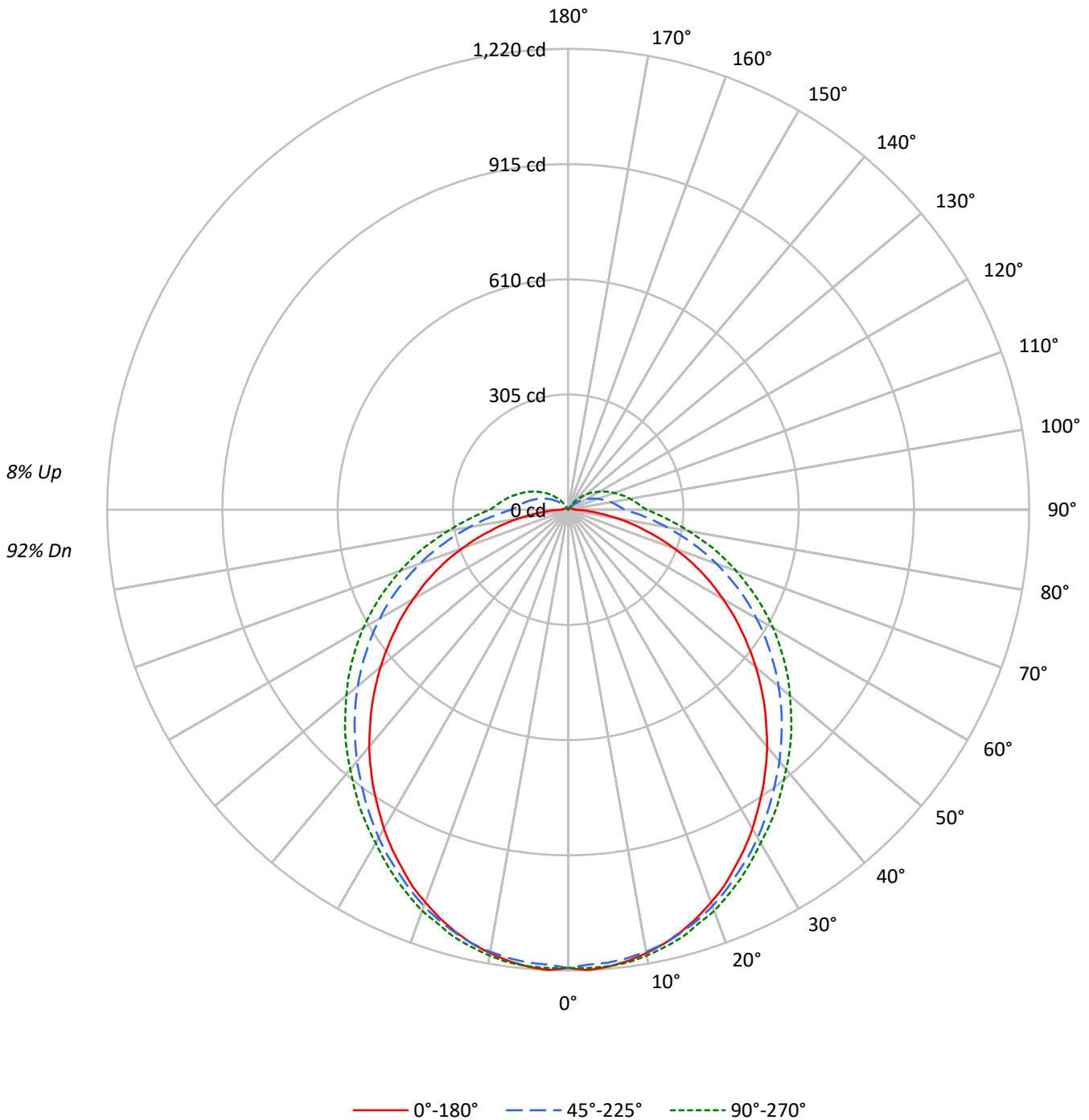
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13059	13059	13059
5°	13099	12730	12737
10°	12982	12437	12375
15°	12815	12104	11979
20°	12576	11723	11544
25°	12281	11286	11085
30°	11978	10893	10621
35°	11639	10476	10251
40°	11316	10098	9854
45°	10957	9735	9536
50°	10603	9375	9187
55°	10213	9006	8873
60°	9830	8633	8550
65°	9440	8235	8167
70°	8853	7787	7773
75°	8108	7274	7374
80°	7251	6771	6918
85°	6464	6426	6652

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10957 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	2.8
10°-20°	328.1	8.0
20°-30°	490.6	12.0
30°-40°	585.8	14.4
40°-50°	612.9	15.0
50°-60°	575.2	14.1
60°-70°	480.4	11.8
70°-80°	343.5	8.4
80°-90°	204.4	5.0
90°-100°	128.4	3.2
100°-110°	94.4	2.3
110°-120°	63.0	1.5
120°-130°	36.0	0.9
130°-140°	16.1	0.4
140°-150°	3.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	933.8	22.9
0°-40°	1519.6	37.3
0°-60°	2707.6	66.4
0°-90°	3736.0	91.6
90°-120°	285.9	7.0
90°-150°	341.4	8.4
90°-180°	341.0	8.4
0°-180°	4077.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1213	1213	1213	1213	1213	
5°	1214	1212	1204	1214	1213	115
15°	1156	1160	1159	1172	1171	326
25°	1044	1057	1061	1078	1078	481
35°	899	920	937	957	962	562
45°	735	766	800	825	835	567
55°	560	604	652	687	698	502
65°	387	439	497	537	550	383
75°	210	272	338	382	398	224
85°	65	131	201	246	259	67
90°	17	82	149	194	208	12
95°	14	66	131	172	185	11
105°	11	42	99	136	148	11
115°	7	22	70	102	112	7
125°	4	4	42	70	79	4
135°	3	1	16	40	46	2
145°	1	0	0	11	16	1
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: P333984

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1213.2	1213.2	1213.2	1213.2	1213.2
2.5°	1219.8	1215.9	1205.3	1215.9	1214.5
5°	1214.5	1211.9	1204.0	1214.5	1213.2
7.5°	1205.3	1205.3	1197.4	1210.6	1209.3
10°	1192.1	1194.7	1188.1	1201.3	1198.7
12.5°	1176.2	1180.2	1176.2	1188.1	1185.5
15°	1156.4	1160.4	1159.0	1172.2	1170.9
17.5°	1132.6	1140.5	1139.2	1151.1	1148.5
20°	1106.2	1114.1	1116.7	1128.6	1130.0
22.5°	1078.4	1086.3	1090.3	1106.2	1104.8
25°	1044.1	1057.3	1061.2	1078.4	1078.4
27.5°	1011.0	1025.5	1033.5	1048.0	1049.3
30°	975.3	992.5	1003.1	1018.9	1018.9
32.5°	935.7	955.5	970.0	987.2	991.2
35°	898.7	919.8	937.0	956.8	962.1
37.5°	859.0	882.8	902.6	925.1	929.1
40°	819.4	843.2	869.6	892.1	897.4
42.5°	775.8	806.2	833.9	859.0	867.0
45°	734.8	766.5	799.6	824.7	835.2
47.5°	691.2	726.9	763.9	791.6	799.6
50°	648.9	685.9	726.9	757.3	766.5
52.5°	604.0	643.6	689.9	721.6	733.5
55°	560.4	604.0	651.5	687.2	697.8
57.5°	518.1	563.0	614.5	650.2	662.1
60°	473.1	520.7	574.9	611.9	626.4
62.5°	430.8	479.7	537.9	574.9	588.1
65°	387.2	438.8	496.9	536.6	549.8
67.5°	343.6	397.8	455.9	499.6	510.1
70°	297.4	354.2	417.6	459.9	473.1
72.5°	255.1	311.9	378.0	421.6	434.8
75°	210.1	272.2	338.3	381.9	397.8
77.5°	171.8	233.9	300.0	346.3	358.1
80°	130.8	195.6	264.3	309.3	322.5
82.5°	95.2	161.2	231.3	276.2	289.4
85°	64.8	130.8	200.9	245.8	259.0
87.5°	39.6	105.7	173.1	218.1	231.3
90°	17.2	81.9	149.3	194.3	207.5
92.5°	15.9	72.7	138.8	182.4	194.3
95°	14.5	66.1	130.8	171.8	185.0
97.5°	13.2	60.8	122.9	162.6	175.8
100°	11.9	54.2	115.0	153.3	166.5
102.5°	10.6	47.6	107.0	144.1	157.3
105°	10.6	42.3	99.1	136.1	148.0
107.5°	9.3	37.0	91.2	126.9	138.8
110°	7.9	31.7	84.6	118.9	129.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.9	26.4	76.7	109.7	121.6
115°	6.6	22.5	70.0	101.8	112.3
117.5°	6.6	17.2	62.1	93.8	104.4
120°	5.3	11.9	55.5	85.9	95.2
122.5°	5.3	7.9	48.9	78.0	87.2
125°	4.0	4.0	42.3	70.0	79.3
127.5°	4.0	2.6	35.7	62.1	71.4
130°	4.0	2.6	29.1	54.2	62.1
132.5°	2.6	2.6	22.5	46.3	55.5
135°	2.6	1.3	15.9	39.6	46.3
137.5°	2.6	1.3	10.6	31.7	38.3
140°	1.3	1.3	5.3	25.1	31.7
142.5°	1.3	0.0	0.0	17.2	23.8
145°	1.3	0.0	0.0	10.6	15.9
147.5°	0.0	0.0	0.0	4.0	9.3
150°	0.0	0.0	0.0	0.0	2.6
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)