

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P243365

Luminaire Tested: **S123DR-H340D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243365
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-54)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H340D840-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1376.1 lumens
Efficiency: N/A
Efficacy: 122.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

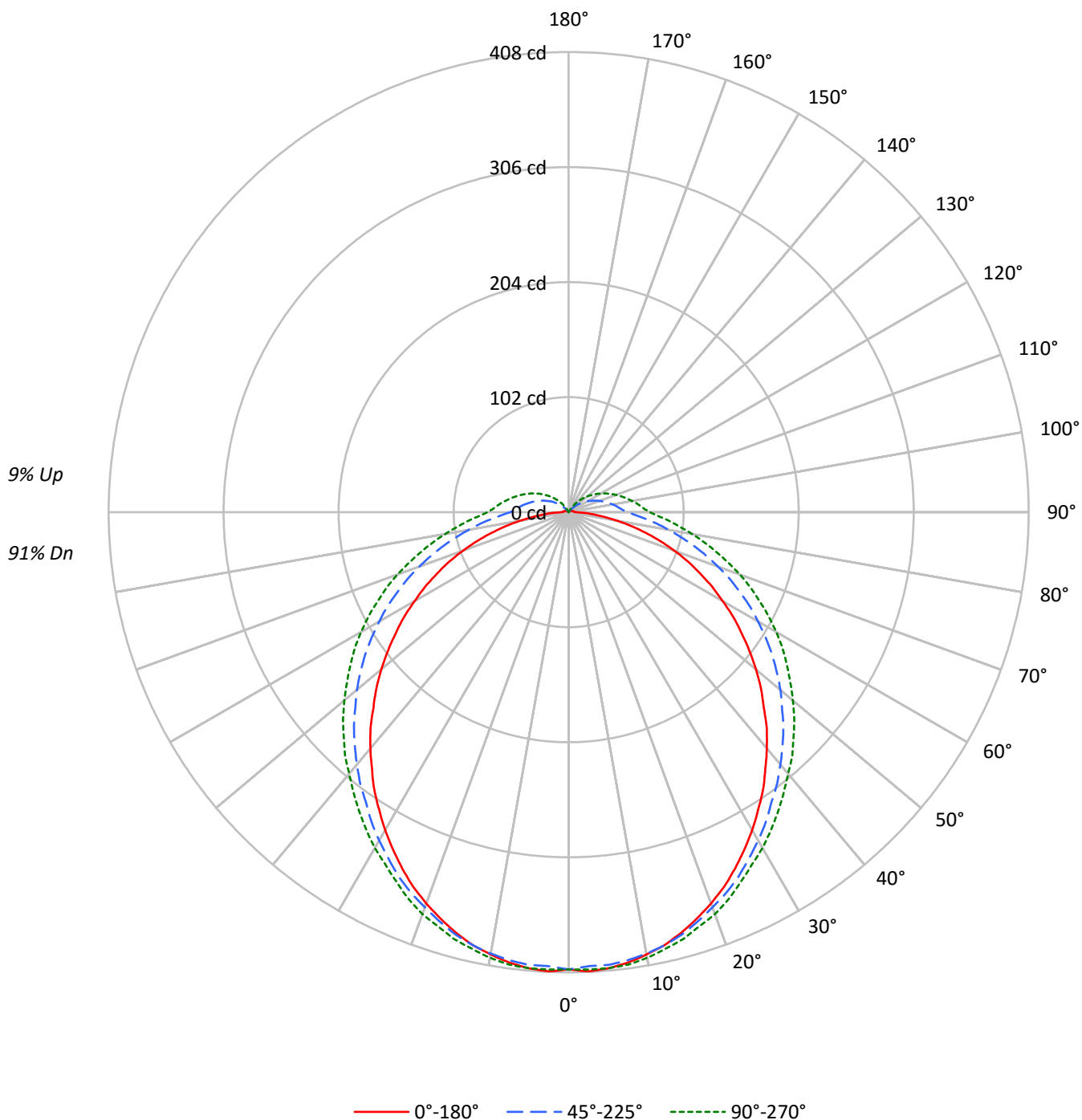
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243365

CATALOG NUMBER: S123DR-H340D840-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot



TEST NUMBER: P243365

CATALOG NUMBER: S123DR-H340D840-X4F0-XX-UDD-D-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4914	4914	4914
5°	4930	4788	4787
10°	4883	4667	4641
15°	4816	4534	4481
20°	4724	4376	4320
25°	4619	4230	4134
30°	4500	4065	3976
35°	4382	3899	3819
40°	4251	3762	3670
45°	4108	3628	3545
50°	3988	3491	3415
55°	3840	3352	3287
60°	3686	3196	3162
65°	3523	3031	3012
70°	3340	2854	2863
75°	3061	2662	2688
80°	2706	2469	2535
85°	2411	2316	2417

TEST NUMBER: P243365

CATALOG NUMBER: S123DR-H340D840-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.5	2.8
10°-20°	109.7	8.0
20°-30°	164.4	11.9
30°-40°	196.7	14.3
40°-50°	206.2	15.0
50°-60°	193.9	14.1
60°-70°	162.2	11.8
70°-80°	116.4	8.5
80°-90°	69.7	5.1
90°-100°	44.2	3.2
100°-110°	32.6	2.4
110°-120°	21.8	1.6
120°-130°	12.6	0.9
130°-140°	5.8	0.4
140°-150°	1.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	312.6	22.7
0°-40°	509.2	37.0
0°-60°	909.3	66.1
0°-90°	1257.7	91.4
90°-120°	98.6	7.2
90°-150°	118.3	8.6
90°-180°	118.0	8.6
0°-180°	1376.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	405	405	405	405	405	
5°	406	405	403	406	406	38
15°	386	388	388	393	392	109
25°	349	353	356	362	362	161
35°	301	308	314	322	324	188
45°	245	257	269	279	282	189
55°	187	203	220	232	236	168
65°	128	148	167	182	187	128
75°	71	92	115	130	135	75
85°	22	44	68	84	90	22
90°	6	28	52	67	72	4
95°	5	23	45	59	64	4
105°	3	15	34	47	51	4
115°	2	8	24	35	39	2
125°	2	2	15	24	28	1
135°	1	0	6	14	16	1
145°	0	0	0	4	6	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: P243365

CATALOG NUMBER: S123DR-H340D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	405.4	405.4	405.4	405.4	405.4
2.5°	407.5	406.3	402.9	406.7	405.9
5°	405.9	405.4	402.9	406.3	405.9
7.5°	402.9	402.9	400.8	404.6	404.6
10°	398.2	399.5	397.4	401.6	401.2
12.5°	393.2	394.9	393.2	397.8	396.5
15°	386.0	388.5	387.7	392.7	391.9
17.5°	377.9	380.9	380.5	385.6	385.1
20°	369.1	372.9	372.9	377.9	379.2
22.5°	359.8	364.0	365.3	370.3	371.2
25°	348.8	353.4	356.4	361.9	361.5
27.5°	337.4	342.9	346.2	352.2	352.2
30°	325.5	331.9	336.1	342.4	343.7
32.5°	312.8	320.5	325.5	332.3	334.0
35°	300.6	307.8	313.7	321.7	323.8
37.5°	286.6	295.5	303.5	312.0	313.3
40°	273.5	283.2	292.1	301.0	302.7
42.5°	260.0	270.1	280.7	289.6	293.4
45°	244.8	257.0	269.3	278.6	282.0
47.5°	231.3	243.5	256.6	267.6	271.4
50°	216.9	229.6	245.2	255.8	259.6
52.5°	202.1	216.0	232.5	243.9	247.7
55°	187.3	202.9	220.3	232.1	236.3
57.5°	173.3	189.0	207.2	220.3	224.9
60°	157.7	175.0	194.0	207.6	212.6
62.5°	143.7	161.5	181.4	194.9	200.0
65°	128.5	147.5	167.4	182.2	186.9
67.5°	114.6	133.2	154.7	169.5	174.6
70°	99.8	119.2	140.8	156.0	161.5
72.5°	85.0	105.7	127.7	143.3	148.0
75°	70.6	92.2	114.6	130.2	135.3
77.5°	57.1	78.6	101.9	117.5	123.0
80°	43.5	66.0	90.0	105.7	111.2
82.5°	31.7	54.5	79.1	94.3	99.3
85°	21.6	44.0	68.5	84.1	89.6
87.5°	12.7	35.5	59.2	74.8	79.5
90°	5.9	27.9	51.6	67.2	71.9
92.5°	5.5	24.9	47.8	62.6	67.2
95°	4.7	22.8	44.8	59.2	63.8
97.5°	4.7	20.7	42.3	56.2	60.5
100°	4.2	18.6	39.7	52.8	57.1
102.5°	3.8	16.5	36.8	49.9	54.1
105°	3.4	14.8	34.2	46.9	50.7
107.5°	3.0	12.7	31.7	44.0	47.8
110°	3.0	11.0	29.2	41.0	44.8



TEST NUMBER: P243365

CATALOG NUMBER: S123DR-H340D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	9.3	26.6	38.0	41.9
115°	2.1	7.6	24.1	35.1	38.9
117.5°	2.1	5.9	21.6	32.6	35.9
120°	2.1	4.7	19.4	29.6	33.0
122.5°	1.7	3.0	17.3	27.1	30.4
125°	1.7	1.7	14.8	24.1	27.5
127.5°	1.3	0.8	12.7	21.6	24.5
130°	1.3	0.8	10.6	19.0	22.0
132.5°	0.8	0.8	8.5	16.5	19.4
135°	0.8	0.4	6.3	14.0	16.5
137.5°	0.8	0.4	4.2	11.4	14.0
140°	0.4	0.4	2.1	8.9	11.4
142.5°	0.4	0.0	0.4	6.8	8.9
145°	0.4	0.0	0.0	4.2	5.9
147.5°	0.4	0.0	0.0	2.1	3.8
150°	0.4	0.0	0.0	0.0	1.3
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)