

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: P243382

Luminaire Tested: **S123DR-H775D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243382
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-H775D940-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2710.0 lumens
Efficiency: N/A
Efficacy: 114.8 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

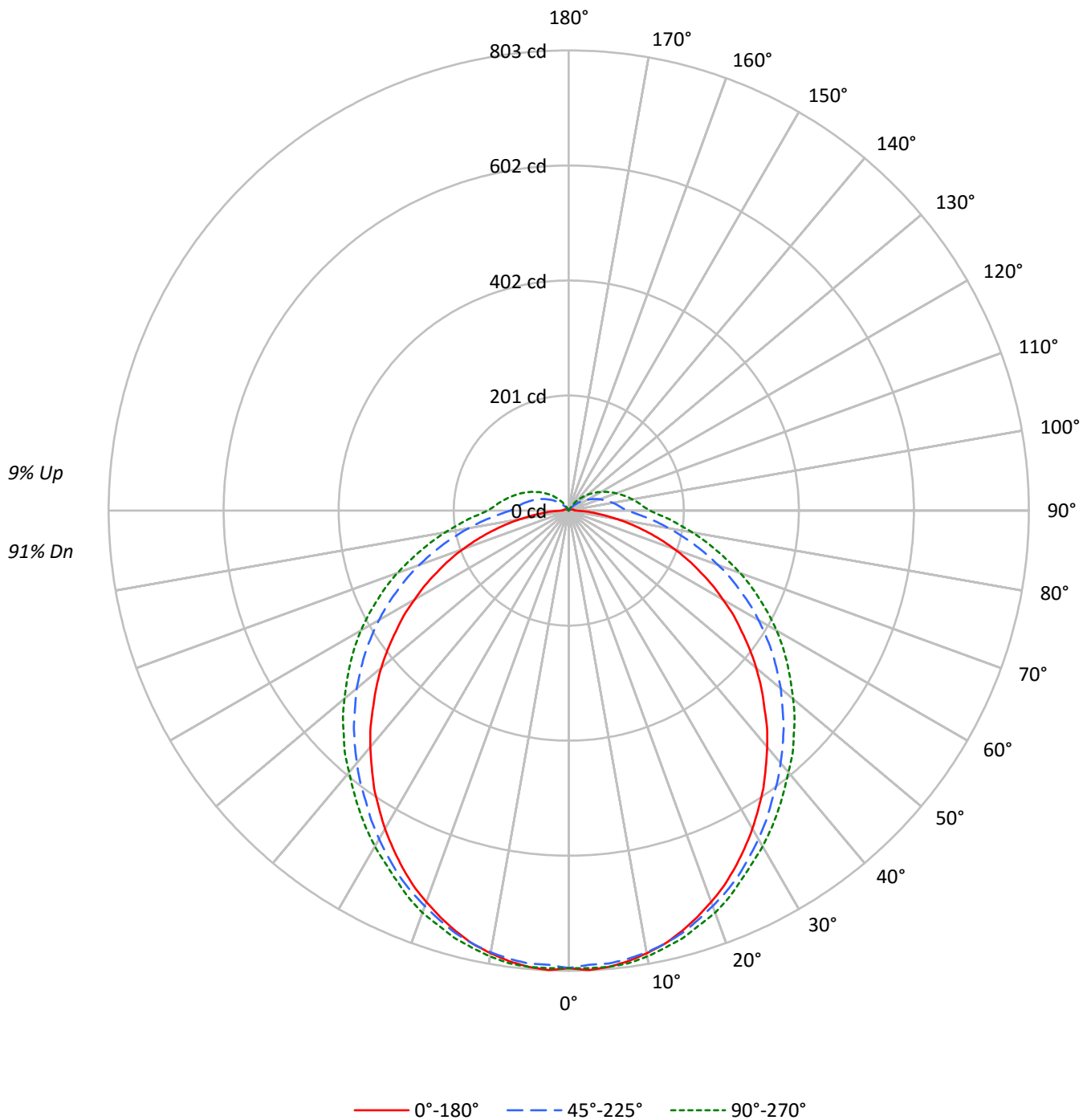
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243382

CATALOG NUMBER: S123DR-H775D940-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot



TEST NUMBER: P243382

CATALOG NUMBER: S123DR-H775D940-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°	9678	9678	9678
5°	9707	9429	9426
10°	9617	9191	9139
15°	9484	8929	8825
20°	9302	8618	8507
25°	9096	8330	8140
30°	8863	8006	7830
35°	8630	7678	7521
40°	8373	7410	7227
45°	8090	7145	6981
50°	7853	6875	6725
55°	7562	6600	6473
60°	7257	6296	6229
65°	6939	5970	5930
70°	6575	5619	5638
75°	6026	5240	5293
80°	5338	4864	4992
85°	4745	4562	4761

TEST NUMBER: P243382

CATALOG NUMBER: S123DR-H775D940-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	2.8
10°-20°	216.1	8.0
20°-30°	323.7	11.9
30°-40°	387.3	14.3
40°-50°	406.1	15.0
50°-60°	381.8	14.1
60°-70°	319.5	11.8
70°-80°	229.3	8.5
80°-90°	137.4	5.1
90°-100°	87.1	3.2
100°-110°	64.2	2.4
110°-120°	43.0	1.6
120°-130°	24.8	0.9
130°-140°	11.4	0.4
140°-150°	2.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	615.6	22.7
0°-40°	1002.9	37.0
0°-60°	1790.8	66.1
0°-90°	2476.9	91.4
90°-120°	194.2	7.2
90°-150°	233.0	8.6
90°-180°	233.0	8.6
0°-180°	2710.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	799	798	793	800	799	76
15°	760	765	764	774	772	214
25°	687	696	702	713	712	316
35°	592	606	618	634	638	370
45°	482	506	530	549	555	373
55°	369	400	434	457	465	330
65°	253	291	330	359	368	251
75°	139	182	226	256	266	148
85°	42	87	135	166	176	44
90°	12	55	102	132	142	8
95°	9	45	88	117	126	8
105°	7	29	67	92	100	7
115°	4	15	48	69	77	5
125°	3	3	29	48	54	3
135°	2	1	12	28	32	1
145°	1	0	0	8	12	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: P243382

CATALOG NUMBER: S123DR-H775D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	798.4	798.4	798.4	798.4	798.4
2.5°	802.6	800.1	793.4	800.9	799.3
5°	799.3	798.4	793.4	800.1	799.3
7.5°	793.4	793.4	789.3	796.8	796.8
10°	784.3	786.8	782.6	790.9	790.1
12.5°	774.3	777.6	774.3	783.4	781.0
15°	760.1	765.1	763.5	773.5	771.8
17.5°	744.3	750.1	749.3	759.3	758.5
20°	726.8	734.3	734.3	744.3	746.8
22.5°	708.5	716.8	719.3	729.3	731.0
25°	686.9	696.0	701.9	712.7	711.8
27.5°	664.4	675.2	681.9	693.5	693.5
30°	641.1	653.6	661.9	674.4	676.9
32.5°	616.1	631.1	641.1	654.4	657.7
35°	592.0	606.1	617.8	633.6	637.7
37.5°	564.5	582.0	597.8	614.4	616.9
40°	538.7	557.8	575.3	592.8	596.1
42.5°	512.0	532.0	552.8	570.3	577.8
45°	482.1	506.2	530.3	548.7	555.3
47.5°	455.4	479.6	505.4	527.0	534.5
50°	427.1	452.1	482.9	503.7	511.2
52.5°	398.0	425.4	457.9	480.4	487.9
55°	368.8	399.6	433.8	457.1	465.4
57.5°	341.4	372.2	408.0	433.8	442.9
60°	310.5	344.7	382.2	408.8	418.8
62.5°	283.1	318.0	357.2	383.8	393.8
65°	253.1	290.6	329.7	358.8	368.0
67.5°	225.6	262.3	304.7	333.9	343.9
70°	196.5	234.8	277.2	307.2	318.0
72.5°	167.3	208.1	251.4	282.2	291.4
75°	139.0	181.5	225.6	256.4	266.4
77.5°	112.4	154.9	200.6	231.5	242.3
80°	85.8	129.9	177.3	208.1	219.0
82.5°	62.4	107.4	155.7	185.7	195.7
85°	42.5	86.6	134.9	165.7	176.5
87.5°	25.0	69.9	116.6	147.4	156.5
90°	11.7	54.9	101.6	132.4	141.5
92.5°	10.8	49.1	94.1	123.2	132.4
95°	9.2	45.0	88.3	116.6	125.7
97.5°	9.2	40.8	83.3	110.7	119.1
100°	8.3	36.6	78.3	104.1	112.4
102.5°	7.5	32.5	72.4	98.2	106.6
105°	6.7	29.1	67.4	92.4	99.9
107.5°	5.8	25.0	62.4	86.6	94.1
110°	5.8	21.6	57.4	80.8	88.3



TEST NUMBER: P243382

CATALOG NUMBER: S123DR-H775D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.0	18.3	52.5	74.9	82.4
115°	4.2	15.0	47.5	69.1	76.6
117.5°	4.2	11.7	42.5	64.1	70.8
120°	4.2	9.2	38.3	58.3	64.9
122.5°	3.3	5.8	34.1	53.3	59.9
125°	3.3	3.3	29.1	47.5	54.1
127.5°	2.5	1.7	25.0	42.5	48.3
130°	2.5	1.7	20.8	37.5	43.3
132.5°	1.7	1.7	16.7	32.5	38.3
135°	1.7	0.8	12.5	27.5	32.5
137.5°	1.7	0.8	8.3	22.5	27.5
140°	0.8	0.8	4.2	17.5	22.5
142.5°	0.8	0.0	0.8	13.3	17.5
145°	0.8	0.0	0.0	8.3	11.7
147.5°	0.8	0.0	0.0	4.2	7.5
150°	0.8	0.0	0.0	0.0	2.5
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)