

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: P243373

Luminaire Tested: **S123DR-H1000D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243373
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-H1000D930-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3195.4 lumens
Efficiency: N/A
Efficacy: 101.4 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

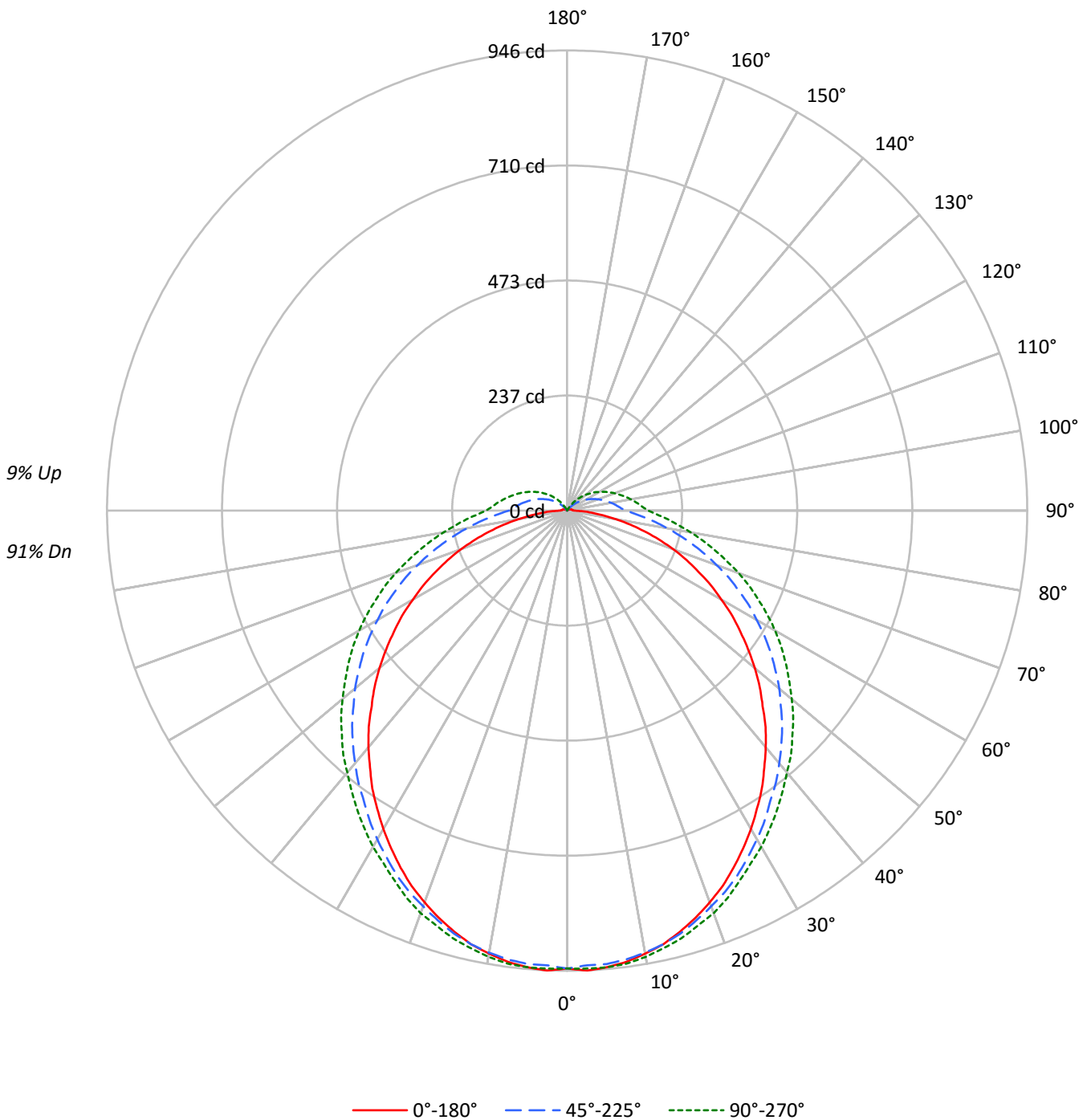
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11412	11412	11412
5°	11445	11119	11113
10°	11340	10838	10775
15°	11183	10528	10406
20°	10969	10162	10031
25°	10724	9821	9599
30°	10450	9440	9232
35°	10175	9052	8869
40°	9873	8738	8522
45°	9538	8425	8231
50°	9259	8106	7931
55°	8917	7783	7634
60°	8559	7423	7345
65°	8181	7040	6992
70°	7753	6627	6648
75°	7106	6178	6241
80°	6290	5736	5886
85°	5593	5377	5613



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.4	2.8
10°-20°	254.8	8.0
20°-30°	381.6	11.9
30°-40°	456.7	14.3
40°-50°	478.9	15.0
50°-60°	450.2	14.1
60°-70°	376.7	11.8
70°-80°	270.4	8.5
80°-90°	162.0	5.1
90°-100°	102.7	3.2
100°-110°	75.7	2.4
110°-120°	50.6	1.6
120°-130°	29.2	0.9
130°-140°	13.5	0.4
140°-150°	3.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	725.9	22.7
0°-40°	1182.5	37.0
0°-60°	2111.6	66.1
0°-90°	2920.6	91.4
90°-120°	229.0	7.2
90°-150°	274.8	8.6
90°-180°	275.0	8.6
0°-180°	3195.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	942	942	942	942	942	
5°	942	942	936	943	942	89
15°	896	902	900	912	910	253
25°	810	821	828	840	839	373
35°	698	715	728	747	752	436
45°	568	597	625	647	655	440
55°	435	471	512	539	549	389
65°	298	343	389	423	434	296
75°	164	214	266	302	314	174
85°	50	102	159	195	208	51
90°	14	65	120	156	167	10
95°	11	53	104	137	148	9
105°	8	34	80	109	118	8
115°	5	18	56	82	90	5
125°	4	4	34	56	64	3
135°	2	1	15	32	38	2
145°	1	0	0	10	14	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	941.5	941.5	941.5	941.5	941.5
2.5°	946.4	943.4	935.6	944.4	942.4
5°	942.4	941.5	935.6	943.4	942.4
7.5°	935.6	935.6	930.7	939.5	939.5
10°	924.8	927.7	922.8	932.6	931.6
12.5°	913.0	916.9	913.0	923.8	920.8
15°	896.3	902.2	900.2	912.0	910.0
17.5°	877.6	884.5	883.5	895.3	894.3
20°	857.0	865.9	865.9	877.6	880.6
22.5°	835.4	845.2	848.2	860.0	861.9
25°	809.9	820.7	827.6	840.3	839.4
27.5°	783.4	796.2	804.0	817.8	817.8
30°	755.9	770.6	780.5	795.2	798.1
32.5°	726.5	744.1	755.9	771.6	775.5
35°	698.0	714.7	728.4	747.1	752.0
37.5°	665.6	686.2	704.9	724.5	727.4
40°	635.2	657.7	678.4	699.0	702.9
42.5°	603.7	627.3	651.8	672.5	681.3
45°	568.4	596.9	625.3	646.9	654.8
47.5°	537.0	565.5	595.9	621.4	630.3
50°	503.6	533.1	569.4	593.9	602.8
52.5°	469.3	501.6	539.9	566.4	575.3
55°	434.9	471.2	511.5	539.0	548.8
57.5°	402.5	438.8	481.0	511.5	522.3
60°	366.2	406.4	450.6	482.0	493.8
62.5°	333.8	375.0	421.1	452.6	464.3
65°	298.4	342.6	388.8	423.1	433.9
67.5°	266.0	309.2	359.3	393.7	405.4
70°	231.7	276.8	326.9	362.2	375.0
72.5°	197.3	245.4	296.5	332.8	343.6
75°	163.9	214.0	266.0	302.4	314.1
77.5°	132.5	182.6	236.6	272.9	285.7
80°	101.1	153.1	209.1	245.4	258.2
82.5°	73.6	126.6	183.6	218.9	230.7
85°	50.1	102.1	159.0	195.4	208.1
87.5°	29.5	82.5	137.4	173.8	184.6
90°	13.7	64.8	119.8	156.1	166.9
92.5°	12.8	57.9	110.9	145.3	156.1
95°	10.8	53.0	104.1	137.4	148.2
97.5°	10.8	48.1	98.2	130.6	140.4
100°	9.8	43.2	92.3	122.7	132.5
102.5°	8.8	38.3	85.4	115.8	125.7
105°	7.9	34.4	79.5	109.0	117.8
107.5°	6.9	29.5	73.6	102.1	110.9
110°	6.9	25.5	67.7	95.2	104.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.9	21.6	61.8	88.4	97.2
115°	4.9	17.7	56.0	81.5	90.3
117.5°	4.9	13.7	50.1	75.6	83.4
120°	4.9	10.8	45.2	68.7	76.6
122.5°	3.9	6.9	40.2	62.8	70.7
125°	3.9	3.9	34.4	56.0	63.8
127.5°	2.9	2.0	29.5	50.1	56.9
130°	2.9	2.0	24.5	44.2	51.0
132.5°	2.0	2.0	19.6	38.3	45.2
135°	2.0	1.0	14.7	32.4	38.3
137.5°	2.0	1.0	9.8	26.5	32.4
140°	1.0	1.0	4.9	20.6	26.5
142.5°	1.0	0.0	1.0	15.7	20.6
145°	1.0	0.0	0.0	9.8	13.7
147.5°	1.0	0.0	0.0	4.9	8.8
150°	1.0	0.0	0.0	0.0	2.9
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)