

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: P242510

Luminaire Tested: **S123DR-S340D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242510
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 (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-S340D930-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1098.3 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

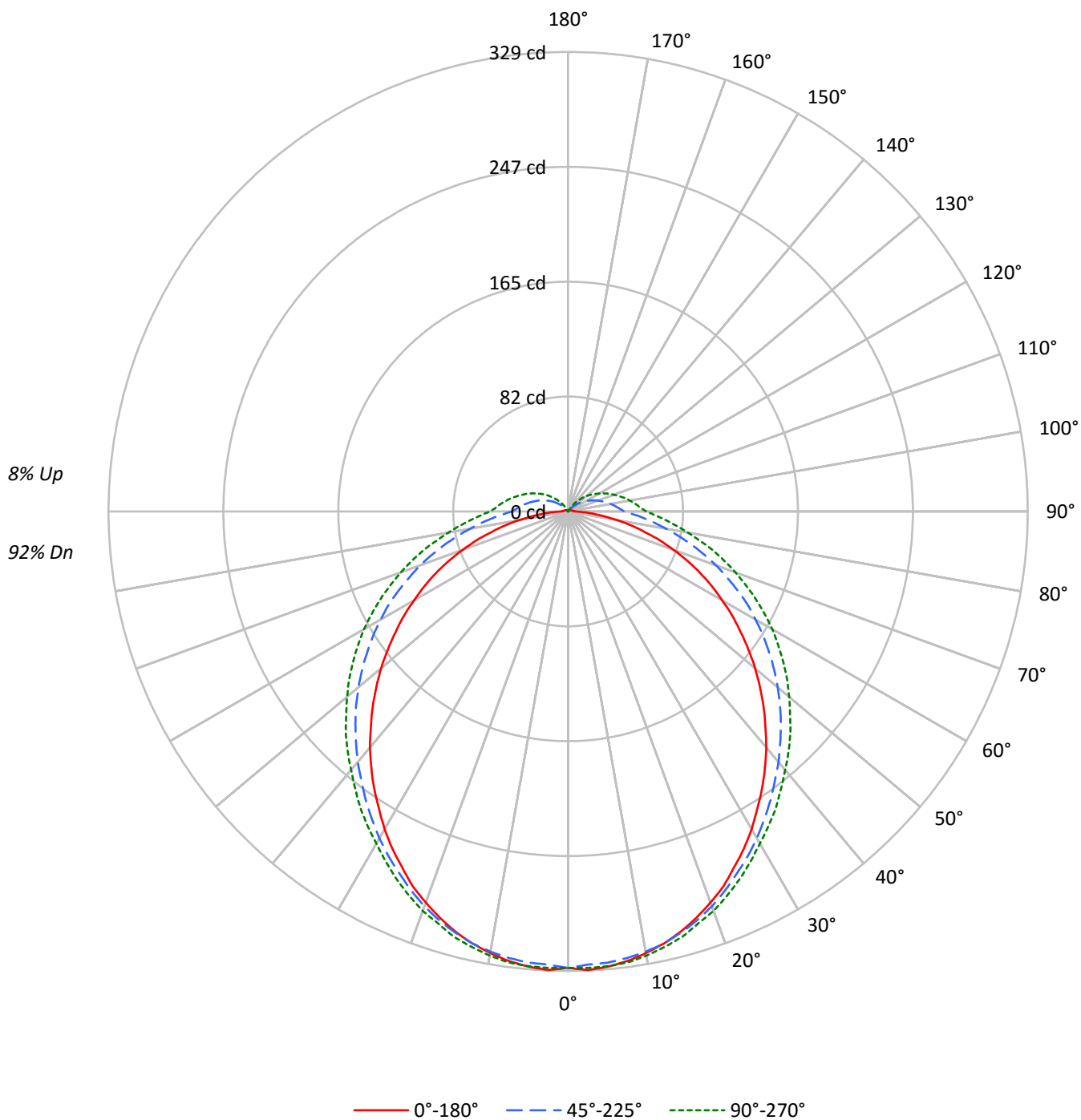
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
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°	3961	3961	3961
5°	3973	3854	3854
10°	3937	3758	3735
15°	3887	3651	3607
20°	3814	3530	3468
25°	3724	3393	3322
30°	3632	3268	3175
35°	3529	3137	3057
40°	3430	3016	2930
45°	3321	2902	2828
50°	3214	2788	2717
55°	3094	2670	2615
60°	2978	2552	2509
65°	2860	2423	2387
70°	2680	2281	2259
75°	2454	2116	2128
80°	2190	1953	1981
85°	1942	1829	1883

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.0	2.8
10°-20°	88.4	8.0
20°-30°	132.2	12.0
30°-40°	157.8	14.4
40°-50°	165.1	15.0
50°-60°	154.9	14.1
60°-70°	129.4	11.8
70°-80°	92.5	8.4
80°-90°	55.0	5.0
90°-100°	34.6	3.2
100°-110°	25.4	2.3
110°-120°	17.0	1.5
120°-130°	9.7	0.9
130°-140°	4.4	0.4
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	251.5	22.9
0°-40°	409.3	37.3
0°-60°	729.3	66.4
0°-90°	1006.3	91.6
90°-120°	77.0	7.0
90°-150°	92.0	8.4
90°-180°	92.0	8.4
0°-180°	1098.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	327	327	327	327	327	
5°	327	326	324	327	327	31
15°	312	312	312	316	315	88
25°	281	285	286	290	290	130
35°	242	248	252	258	259	151
45°	198	206	215	222	225	153
55°	151	163	176	185	188	135
65°	104	118	134	144	148	103
75°	57	73	91	103	107	60
85°	17	35	54	66	70	18
90°	5	22	40	52	56	3
95°	4	18	35	46	50	3
105°	3	11	27	37	40	3
115°	2	6	19	27	30	2
125°	1	1	11	19	21	1
135°	1	0	4	11	12	1
145°	0	0	0	3	4	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°	326.8	326.8	326.8	326.8	326.8
2.5°	328.6	327.5	324.7	327.5	327.1
5°	327.1	326.4	324.3	327.1	326.8
7.5°	324.7	324.7	322.5	326.1	325.7
10°	321.1	321.8	320.0	323.6	322.9
12.5°	316.8	317.9	316.8	320.0	319.3
15°	311.5	312.5	312.2	315.8	315.4
17.5°	305.1	307.2	306.9	310.1	309.3
20°	298.0	300.1	300.8	304.0	304.4
22.5°	290.5	292.6	293.7	298.0	297.6
25°	281.2	284.8	285.9	290.5	290.5
27.5°	272.3	276.2	278.4	282.3	282.6
30°	262.7	267.3	270.2	274.5	274.5
32.5°	252.0	257.4	261.3	265.9	267.0
35°	242.1	247.8	252.4	257.7	259.2
37.5°	231.4	237.8	243.1	249.2	250.3
40°	220.7	227.1	234.2	240.3	241.7
42.5°	209.0	217.1	224.6	231.4	233.5
45°	197.9	206.5	215.4	222.1	225.0
47.5°	186.2	195.8	205.8	213.2	215.4
50°	174.8	184.8	195.8	204.0	206.5
52.5°	162.7	173.4	185.8	194.4	197.6
55°	150.9	162.7	175.5	185.1	188.0
57.5°	139.5	151.6	165.5	175.1	178.3
60°	127.4	140.3	154.9	164.8	168.7
62.5°	116.0	129.2	144.9	154.9	158.4
65°	104.3	118.2	133.8	144.5	148.1
67.5°	92.6	107.1	122.8	134.6	137.4
70°	80.1	95.4	112.5	123.9	127.4
72.5°	68.7	84.0	101.8	113.6	117.1
75°	56.6	73.3	91.1	102.9	107.1
77.5°	46.3	63.0	80.8	93.3	96.5
80°	35.2	52.7	71.2	83.3	86.9
82.5°	25.6	43.4	62.3	74.4	78.0
85°	17.4	35.2	54.1	66.2	69.8
87.5°	10.7	28.5	46.6	58.7	62.3
90°	4.6	22.1	40.2	52.3	55.9
92.5°	4.3	19.6	37.4	49.1	52.3
95°	3.9	17.8	35.2	46.3	49.8
97.5°	3.6	16.4	33.1	43.8	47.3
100°	3.2	14.6	31.0	41.3	44.9
102.5°	2.8	12.8	28.8	38.8	42.4
105°	2.8	11.4	26.7	36.7	39.9
107.5°	2.5	10.0	24.6	34.2	37.4
110°	2.1	8.5	22.8	32.0	34.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	7.1	20.6	29.5	32.8
115°	1.8	6.1	18.9	27.4	30.3
117.5°	1.8	4.6	16.7	25.3	28.1
120°	1.4	3.2	15.0	23.1	25.6
122.5°	1.4	2.1	13.2	21.0	23.5
125°	1.1	1.1	11.4	18.9	21.4
127.5°	1.1	0.7	9.6	16.7	19.2
130°	1.1	0.7	7.8	14.6	16.7
132.5°	0.7	0.7	6.1	12.5	15.0
135°	0.7	0.4	4.3	10.7	12.5
137.5°	0.7	0.4	2.8	8.5	10.3
140°	0.4	0.4	1.4	6.8	8.5
142.5°	0.4	0.0	0.0	4.6	6.4
145°	0.4	0.0	0.0	2.8	4.3
147.5°	0.0	0.0	0.0	1.1	2.5
150°	0.0	0.0	0.0	0.0	0.7
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)