

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: P242513

Luminaire Tested: **S123DR-S1000D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242513
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-S1000D930-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: 3207.7 lumens
Efficiency: N/A
Efficacy: 92.2 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

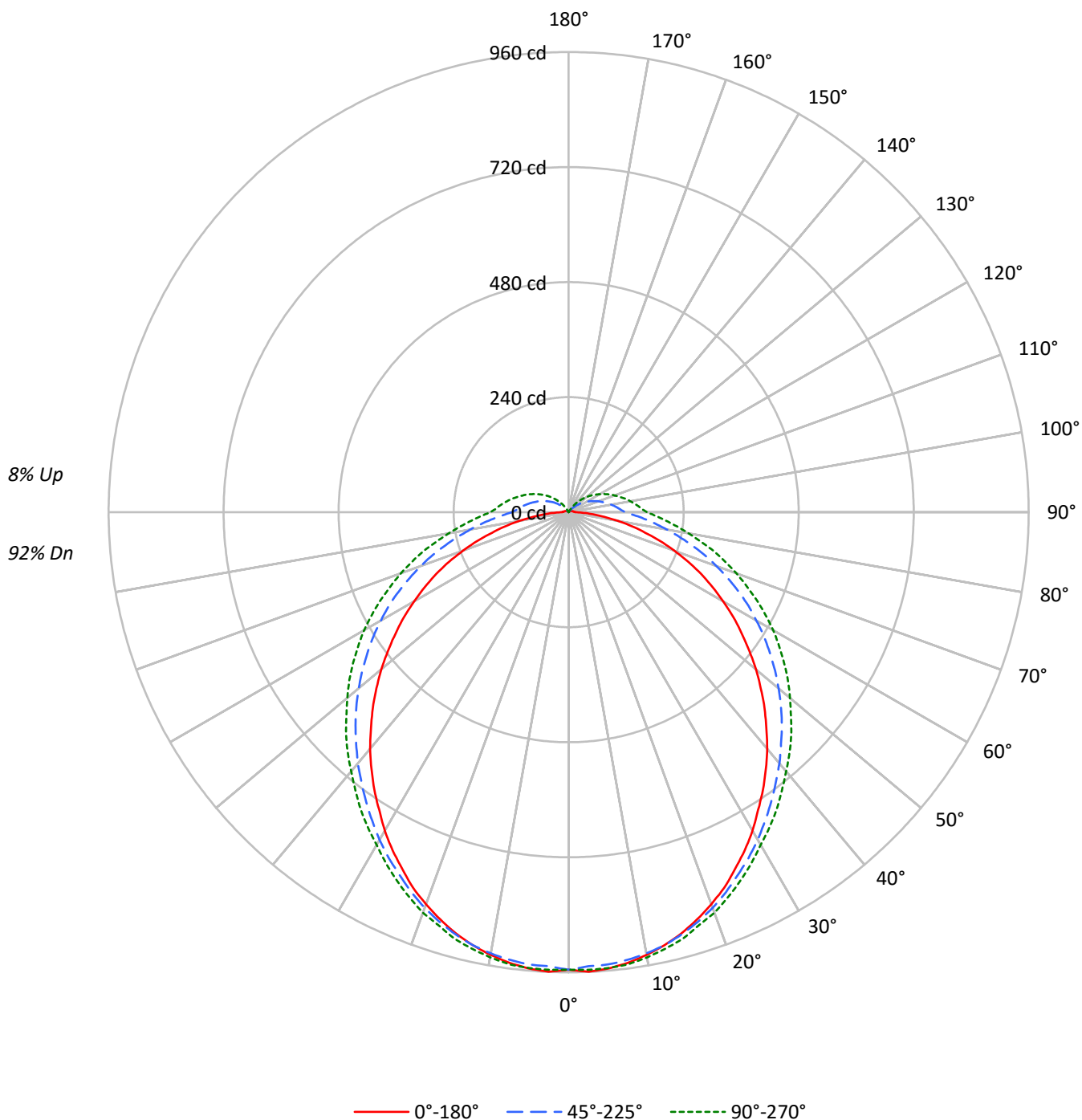
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11570	11570	11570
5°	11604	11257	11256
10°	11499	10977	10907
15°	11350	10664	10534
20°	11138	10311	10127
25°	10877	9908	9702
30°	10608	9544	9273
35°	10306	9162	8927
40°	10019	8811	8560
45°	9701	8474	8260
50°	9386	8141	7933
55°	9038	7799	7636
60°	8699	7451	7330
65°	8351	7078	6970
70°	7827	6659	6599
75°	7166	6183	6219
80°	6402	5703	5783
85°	5682	5343	5497

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.5	2.8
10°-20°	258.1	8.0
20°-30°	386.0	12.0
30°-40°	460.8	14.4
40°-50°	482.2	15.0
50°-60°	452.5	14.1
60°-70°	377.9	11.8
70°-80°	270.3	8.4
80°-90°	160.8	5.0
90°-100°	101.1	3.2
100°-110°	74.3	2.3
110°-120°	49.6	1.5
120°-130°	28.3	0.9
130°-140°	12.7	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°	734.6	22.9
0°-40°	1195.5	37.3
0°-60°	2130.1	66.4
0°-90°	2939.1	91.6
90°-120°	224.9	7.0
90°-150°	268.6	8.4
90°-180°	269.0	8.4
0°-180°	3207.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	956	953	947	956	954	91
15°	910	913	912	922	921	256
25°	821	832	835	848	848	379
35°	707	724	737	753	757	442
45°	578	603	629	649	657	446
55°	441	475	513	541	549	395
65°	305	345	391	422	432	301
75°	165	214	266	300	313	177
85°	51	103	158	193	204	52
90°	14	64	118	153	163	10
95°	11	52	103	135	146	9
105°	8	33	78	107	116	8
115°	5	18	55	80	88	5
125°	3	3	33	55	62	3
135°	2	1	12	31	36	2
145°	1	0	0	8	12	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°	954.5	954.5	954.5	954.5	954.5
2.5°	959.7	956.5	948.2	956.5	955.5
5°	955.5	953.4	947.2	955.5	954.5
7.5°	948.2	948.2	942.0	952.4	951.3
10°	937.8	939.9	934.7	945.1	943.0
12.5°	925.3	928.5	925.3	934.7	932.6
15°	909.7	912.9	911.8	922.2	921.2
17.5°	891.0	897.3	896.2	905.6	903.5
20°	870.2	876.5	878.6	887.9	889.0
22.5°	848.4	854.6	857.8	870.2	869.2
25°	821.4	831.8	834.9	848.4	848.4
27.5°	795.4	806.8	813.1	824.5	825.5
30°	767.3	780.8	789.1	801.6	801.6
32.5°	736.1	751.7	763.1	776.7	779.8
35°	707.0	723.6	737.2	752.7	756.9
37.5°	675.8	694.5	710.1	727.8	730.9
40°	644.6	663.3	684.1	701.8	706.0
42.5°	610.3	634.2	656.1	675.8	682.0
45°	578.1	603.0	629.0	648.8	657.1
47.5°	543.8	571.8	601.0	622.8	629.0
50°	510.5	539.6	571.8	595.8	603.0
52.5°	475.1	506.3	542.7	567.7	577.0
55°	440.8	475.1	512.6	540.6	549.0
57.5°	407.6	442.9	483.5	511.5	520.9
60°	372.2	409.6	452.3	481.4	492.8
62.5°	338.9	377.4	423.2	452.3	462.7
65°	304.6	345.2	390.9	422.1	432.5
67.5°	270.3	313.0	358.7	393.0	401.3
70°	233.9	278.6	328.5	361.8	372.2
72.5°	200.7	245.4	297.4	331.7	342.1
75°	165.3	214.2	266.2	300.5	313.0
77.5°	135.2	184.0	236.0	272.4	281.8
80°	102.9	153.9	207.9	243.3	253.7
82.5°	74.9	126.8	181.9	217.3	227.7
85°	50.9	102.9	158.0	193.4	203.8
87.5°	31.2	83.2	136.2	171.6	181.9
90°	13.5	64.5	117.5	152.8	163.2
92.5°	12.5	57.2	109.2	143.5	152.8
95°	11.4	52.0	102.9	135.2	145.6
97.5°	10.4	47.8	96.7	127.9	138.3
100°	9.4	42.6	90.5	120.6	131.0
102.5°	8.3	37.4	84.2	113.3	123.7
105°	8.3	33.3	78.0	107.1	116.4
107.5°	7.3	29.1	71.7	99.8	109.2
110°	6.2	25.0	66.5	93.6	101.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.2	20.8	60.3	86.3	95.7
115°	5.2	17.7	55.1	80.1	88.4
117.5°	5.2	13.5	48.9	73.8	82.1
120°	4.2	9.4	43.7	67.6	74.9
122.5°	4.2	6.2	38.5	61.3	68.6
125°	3.1	3.1	33.3	55.1	62.4
127.5°	3.1	2.1	28.1	48.9	56.1
130°	3.1	2.1	22.9	42.6	48.9
132.5°	2.1	2.1	17.7	36.4	43.7
135°	2.1	1.0	12.5	31.2	36.4
137.5°	2.1	1.0	8.3	25.0	30.2
140°	1.0	1.0	4.2	19.8	25.0
142.5°	1.0	0.0	0.0	13.5	18.7
145°	1.0	0.0	0.0	8.3	12.5
147.5°	0.0	0.0	0.0	3.1	7.3
150°	0.0	0.0	0.0	0.0	2.1
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)