

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: P243368

Luminaire Tested: **S123DR-H1000D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243368
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-H1000D840-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: 3957.9 lumens
Efficiency: N/A
Efficacy: 125.6 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

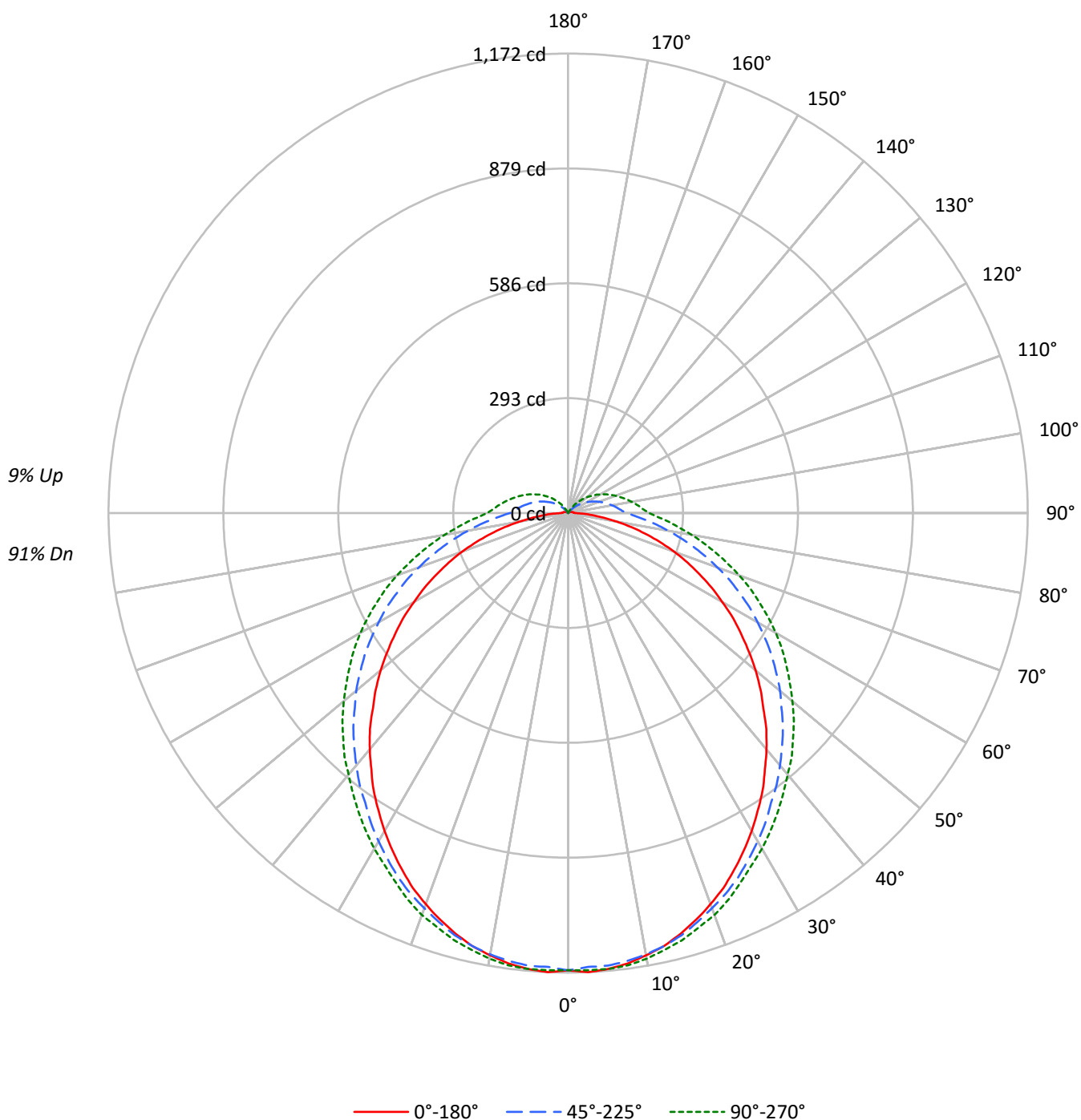
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	14135	14135	14135
5°	14176	13772	13765
10°	14045	13424	13348
15°	13852	13042	12889
20°	13586	12587	12425
25°	13284	12165	11889
30°	12944	11692	11436
35°	12604	11213	10985
40°	12227	10822	10555
45°	11816	10436	10196
50°	11469	10041	9822
55°	11045	9639	9454
60°	10602	9193	9097
65°	10136	8718	8662
70°	9604	8208	8235
75°	8805	7653	7731
80°	7789	7105	7290
85°	6921	6662	6953

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.7	2.8
10°-20°	315.7	8.0
20°-30°	472.7	11.9
30°-40°	565.6	14.3
40°-50°	593.1	15.0
50°-60°	557.6	14.1
60°-70°	466.7	11.8
70°-80°	334.9	8.5
80°-90°	200.6	5.1
90°-100°	127.2	3.2
100°-110°	93.7	2.4
110°-120°	62.7	1.6
120°-130°	36.2	0.9
130°-140°	16.7	0.4
140°-150°	3.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	899.1	22.7
0°-40°	1464.7	37.0
0°-60°	2615.5	66.1
0°-90°	3617.6	91.4
90°-120°	283.6	7.2
90°-150°	340.3	8.6
90°-180°	340.0	8.6
0°-180°	3957.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1166	1166	1166	1166	1166	
5°	1167	1166	1159	1169	1167	111
15°	1110	1118	1115	1130	1127	313
25°	1003	1017	1025	1041	1040	462
35°	865	885	902	925	931	540
45°	704	739	775	801	811	545
55°	539	584	634	668	680	482
65°	370	424	482	524	538	367
75°	203	265	330	374	389	216
85°	62	126	197	242	258	64
90°	17	80	148	193	207	12
95°	13	66	129	170	184	11
105°	10	43	98	135	146	10
115°	6	22	69	101	112	7
125°	5	5	43	69	79	4
135°	2	1	18	40	47	2
145°	1	0	0	12	17	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°	1166.1	1166.1	1166.1	1166.1	1166.1
2.5°	1172.2	1168.6	1158.8	1169.8	1167.3
5°	1167.3	1166.1	1158.8	1168.6	1167.3
7.5°	1158.8	1158.8	1152.7	1163.7	1163.7
10°	1145.4	1149.1	1143.0	1155.2	1154.0
12.5°	1130.9	1135.7	1130.9	1144.2	1140.6
15°	1110.2	1117.5	1115.1	1129.6	1127.2
17.5°	1087.1	1095.6	1094.4	1109.0	1107.8
20°	1061.5	1072.5	1072.5	1087.1	1090.7
22.5°	1034.8	1047.0	1050.6	1065.2	1067.6
25°	1003.2	1016.6	1025.1	1040.9	1039.7
27.5°	970.3	986.2	995.9	1012.9	1012.9
30°	936.3	954.5	966.7	984.9	988.6
32.5°	899.8	921.7	936.3	955.8	960.6
35°	864.6	885.2	902.3	925.4	931.4
37.5°	824.4	850.0	873.1	897.4	901.0
40°	786.7	814.7	840.2	865.8	870.6
42.5°	747.8	777.0	807.4	832.9	843.9
45°	704.1	739.3	774.6	801.3	811.1
47.5°	665.1	700.4	738.1	769.7	780.7
50°	623.8	660.3	705.3	735.7	746.6
52.5°	581.2	621.4	668.8	701.6	712.6
55°	538.7	583.7	633.5	667.6	679.7
57.5°	498.6	543.5	595.8	633.5	646.9
60°	453.6	503.4	558.1	597.0	611.6
62.5°	413.4	464.5	521.7	560.6	575.2
65°	369.7	424.4	481.5	524.1	537.5
67.5°	329.5	383.0	445.0	487.6	502.2
70°	287.0	342.9	404.9	448.7	464.5
72.5°	244.4	304.0	367.2	412.2	425.6
75°	203.1	265.1	329.5	374.5	389.1
77.5°	164.2	226.2	293.1	338.0	353.8
80°	125.2	189.7	259.0	304.0	319.8
82.5°	91.2	156.9	227.4	271.2	285.8
85°	62.0	126.5	197.0	242.0	257.8
87.5°	36.5	102.1	170.2	215.2	228.6
90°	17.0	80.3	148.3	193.3	206.7
92.5°	15.8	71.7	137.4	180.0	193.3
95°	13.4	65.7	128.9	170.2	183.6
97.5°	13.4	59.6	121.6	161.7	173.9
100°	12.2	53.5	114.3	152.0	164.2
102.5°	10.9	47.4	105.8	143.5	155.6
105°	9.7	42.6	98.5	135.0	145.9
107.5°	8.5	36.5	91.2	126.5	137.4
110°	8.5	31.6	83.9	117.9	128.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.3	26.8	76.6	109.4	120.4
115°	6.1	21.9	69.3	100.9	111.9
117.5°	6.1	17.0	62.0	93.6	103.4
120°	6.1	13.4	55.9	85.1	94.8
122.5°	4.9	8.5	49.9	77.8	87.6
125°	4.9	4.9	42.6	69.3	79.0
127.5°	3.6	2.4	36.5	62.0	70.5
130°	3.6	2.4	30.4	54.7	63.2
132.5°	2.4	2.4	24.3	47.4	55.9
135°	2.4	1.2	18.2	40.1	47.4
137.5°	2.4	1.2	12.2	32.8	40.1
140°	1.2	1.2	6.1	25.5	32.8
142.5°	1.2	0.0	1.2	19.5	25.5
145°	1.2	0.0	0.0	12.2	17.0
147.5°	1.2	0.0	0.0	6.1	10.9
150°	1.2	0.0	0.0	0.0	3.6
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)