

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: P242500

Luminaire Tested: **S123DR-S1165D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242500
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-S1165D830-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4309.8 lumens
Efficiency: N/A
Efficacy: 104.9 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

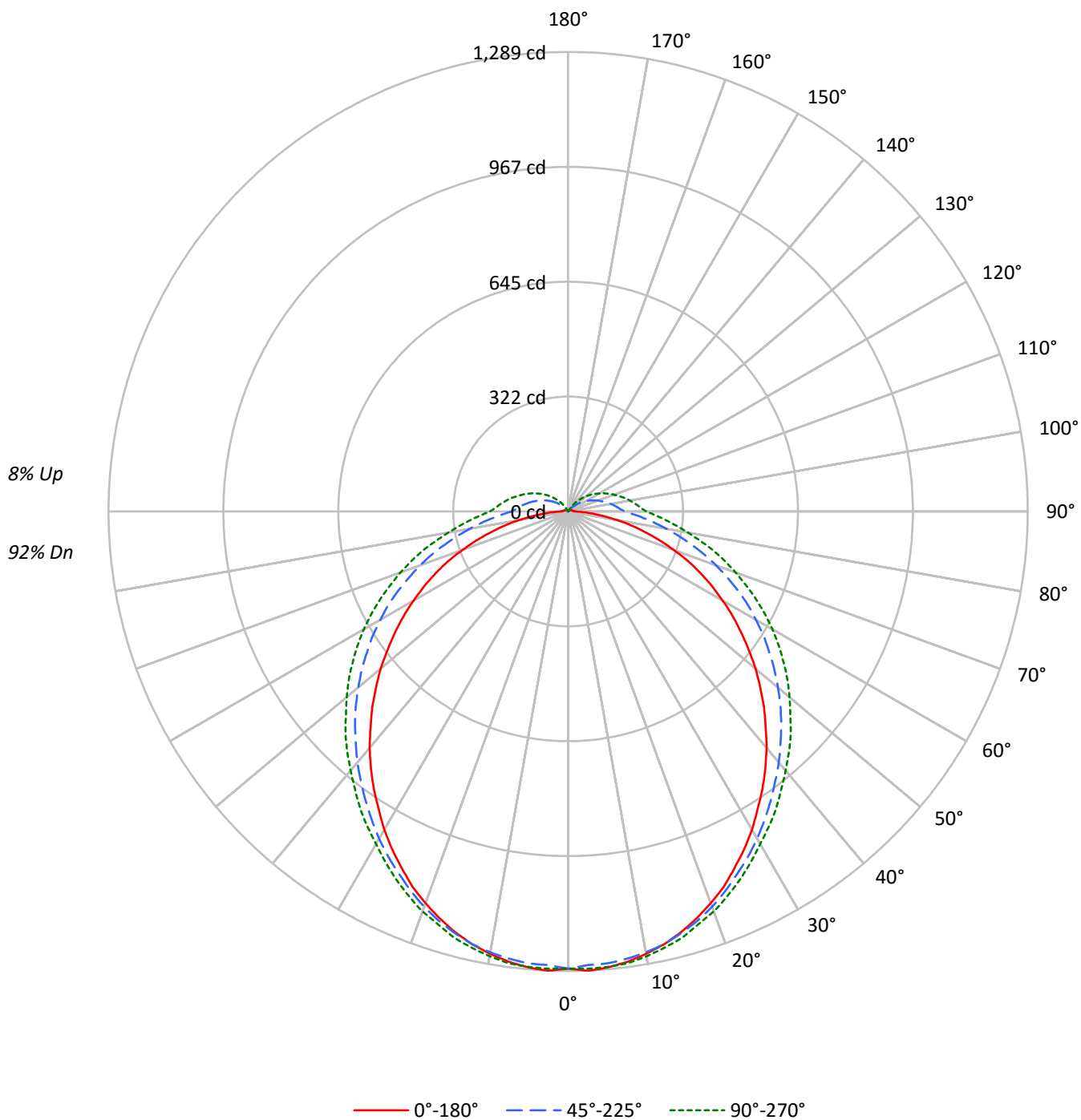
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	97	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	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	24	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15544	15544	15544
5°	15591	15124	15123
10°	15450	14748	14655
15°	15251	14328	14153
20°	14965	13853	13606
25°	14613	13312	13035
30°	14252	12824	12459
35°	13847	12308	11995
40°	13462	11839	11500
45°	13034	11386	11099
50°	12611	10938	10659
55°	12144	10479	10260
60°	11688	10010	9848
65°	11222	9510	9364
70°	10517	8948	8866
75°	9629	8306	8355
80°	8604	7665	7769
85°	7636	7179	7385

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.7	2.8
10°-20°	346.8	8.0
20°-30°	518.6	12.0
30°-40°	619.2	14.4
40°-50°	647.8	15.0
50°-60°	608.0	14.1
60°-70°	507.8	11.8
70°-80°	363.1	8.4
80°-90°	216.1	5.0
90°-100°	135.8	3.2
100°-110°	99.8	2.3
110°-120°	66.6	1.5
120°-130°	38.0	0.9
130°-140°	17.1	0.4
140°-150°	3.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	987.0	22.9
0°-40°	1606.2	37.3
0°-60°	2862.0	66.4
0°-90°	3948.9	91.6
90°-120°	302.2	7.0
90°-150°	360.8	8.4
90°-180°	361.0	8.4
0°-180°	4309.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1282	1282	1282	1282	1282	
5°	1284	1281	1273	1284	1282	122
15°	1222	1226	1225	1239	1238	344
25°	1104	1118	1122	1140	1140	509
35°	950	972	990	1011	1017	594
45°	777	810	845	872	883	599
55°	592	638	689	726	738	530
65°	409	464	525	567	581	405
75°	222	288	358	404	420	237
85°	68	138	212	260	274	70
90°	18	87	158	205	219	13
95°	15	70	138	182	196	12
105°	11	45	105	144	156	11
115°	7	24	74	108	119	7
125°	4	4	45	74	84	4
135°	3	1	17	42	49	2
145°	1	0	0	11	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°	1282.4	1282.4	1282.4	1282.4	1282.4
2.5°	1289.4	1285.2	1274.0	1285.2	1283.8
5°	1283.8	1281.0	1272.6	1283.8	1282.4
7.5°	1274.0	1274.0	1265.6	1279.6	1278.2
10°	1260.0	1262.8	1255.8	1269.8	1267.0
12.5°	1243.3	1247.5	1243.3	1255.8	1253.0
15°	1222.3	1226.5	1225.1	1239.1	1237.7
17.5°	1197.2	1205.5	1204.1	1216.7	1213.9
20°	1169.2	1177.6	1180.4	1193.0	1194.4
22.5°	1139.9	1148.3	1152.5	1169.2	1167.8
25°	1103.6	1117.5	1121.7	1139.9	1139.9
27.5°	1068.6	1084.0	1092.4	1107.8	1109.2
30°	1030.9	1049.1	1060.3	1077.0	1077.0
32.5°	989.0	1010.0	1025.3	1043.5	1047.7
35°	949.9	972.3	990.4	1011.4	1017.0
37.5°	908.0	933.1	954.1	977.8	982.0
40°	866.1	891.2	919.2	942.9	948.5
42.5°	820.0	852.1	881.5	908.0	916.4
45°	776.7	810.2	845.1	871.7	882.9
47.5°	730.6	768.3	807.4	836.8	845.1
50°	685.9	725.0	768.3	800.4	810.2
52.5°	638.4	680.3	729.2	762.7	775.3
55°	592.3	638.4	688.7	726.4	737.6
57.5°	547.6	595.1	649.6	687.3	699.9
60°	500.1	550.4	607.7	646.8	662.1
62.5°	455.4	507.1	568.5	607.7	621.6
65°	409.3	463.8	525.2	567.2	581.1
67.5°	363.2	420.5	481.9	528.0	539.2
70°	314.3	374.4	441.4	486.1	500.1
72.5°	269.6	329.7	399.5	445.6	459.6
75°	222.1	287.8	357.6	403.7	420.5
77.5°	181.6	247.3	317.1	366.0	378.6
80°	138.3	206.7	279.4	326.9	340.8
82.5°	100.6	170.4	244.5	292.0	305.9
85°	68.4	138.3	212.3	259.8	273.8
87.5°	41.9	111.8	183.0	230.5	244.5
90°	18.2	86.6	157.9	205.3	219.3
92.5°	16.8	76.8	146.7	192.8	205.3
95°	15.4	69.8	138.3	181.6	195.6
97.5°	14.0	64.3	129.9	171.8	185.8
100°	12.6	57.3	121.5	162.0	176.0
102.5°	11.2	50.3	113.2	152.3	166.2
105°	11.2	44.7	104.8	143.9	156.5
107.5°	9.8	39.1	96.4	134.1	146.7
110°	8.4	33.5	89.4	125.7	136.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.4	27.9	81.0	115.9	128.5
115°	7.0	23.7	74.0	107.6	118.7
117.5°	7.0	18.2	65.7	99.2	110.4
120°	5.6	12.6	58.7	90.8	100.6
122.5°	5.6	8.4	51.7	82.4	92.2
125°	4.2	4.2	44.7	74.0	83.8
127.5°	4.2	2.8	37.7	65.7	75.4
130°	4.2	2.8	30.7	57.3	65.7
132.5°	2.8	2.8	23.7	48.9	58.7
135°	2.8	1.4	16.8	41.9	48.9
137.5°	2.8	1.4	11.2	33.5	40.5
140°	1.4	1.4	5.6	26.5	33.5
142.5°	1.4	0.0	0.0	18.2	25.1
145°	1.4	0.0	0.0	11.2	16.8
147.5°	0.0	0.0	0.0	4.2	9.8
150°	0.0	0.0	0.0	0.0	2.8
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)