

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: P242508

Luminaire Tested: **S123DR-S1000D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242508
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-S1000D840-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3973.2 lumens
Efficiency: N/A
Efficacy: 114.2 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

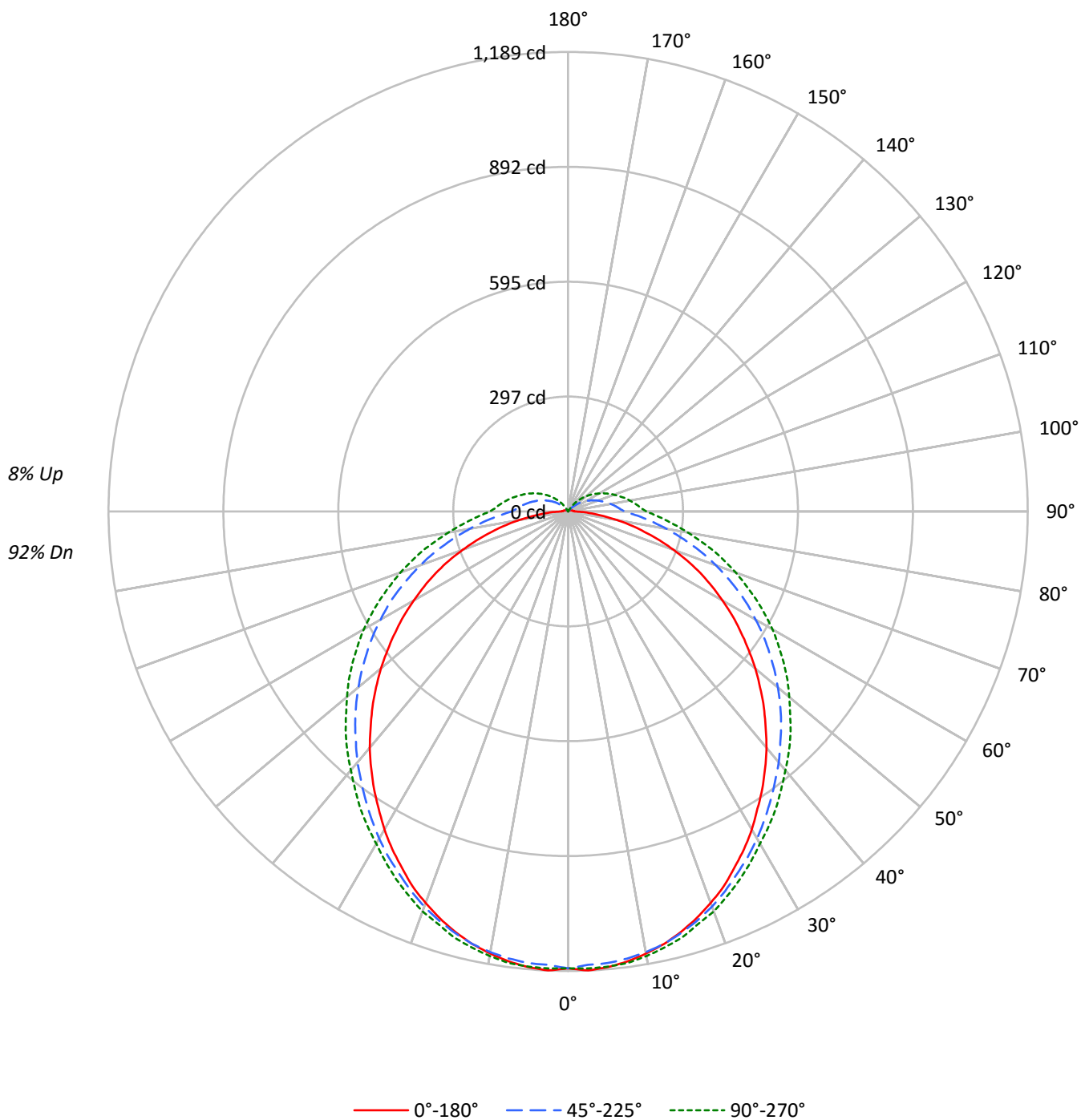
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	14330	14330	14330
5°	14373	13943	13941
10°	14243	13598	13511
15°	14059	13209	13047
20°	13796	12771	12543
25°	13472	12272	12017
30°	13139	11823	11486
35°	12766	11348	11057
40°	12411	10914	10601
45°	12015	10497	10231
50°	11626	10084	9826
55°	11195	9660	9458
60°	10774	9228	9079
65°	10344	8767	8633
70°	9698	8251	8173
75°	8879	7658	7701
80°	7932	7067	7162
85°	7044	6618	6808

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.1	2.8
10°-20°	319.7	8.0
20°-30°	478.1	12.0
30°-40°	570.8	14.4
40°-50°	597.2	15.0
50°-60°	560.5	14.1
60°-70°	468.1	11.8
70°-80°	334.7	8.4
80°-90°	199.2	5.0
90°-100°	125.2	3.1
100°-110°	92.0	2.3
110°-120°	61.4	1.5
120°-130°	35.1	0.9
130°-140°	15.7	0.4
140°-150°	3.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	909.9	22.9
0°-40°	1480.8	37.3
0°-60°	2638.5	66.4
0°-90°	3640.5	91.6
90°-120°	278.6	7.0
90°-150°	332.7	8.4
90°-180°	333.0	8.4
0°-180°	3973.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1182	1182	1182	1182	1182	
5°	1184	1181	1173	1184	1182	112
15°	1127	1131	1129	1142	1141	317
25°	1017	1030	1034	1051	1051	469
35°	876	896	913	932	938	548
45°	716	747	779	804	814	552
55°	546	588	635	670	680	489
65°	377	428	484	523	536	373
75°	205	265	330	372	388	219
85°	63	128	196	240	252	65
90°	17	80	146	189	202	12
95°	14	64	128	167	180	11
105°	10	41	97	133	144	10
115°	6	22	68	99	110	7
125°	4	4	41	68	77	4
135°	3	1	16	39	45	2
145°	1	0	0	10	16	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°	1182.2	1182.2	1182.2	1182.2	1182.2
2.5°	1188.7	1184.8	1174.5	1184.8	1183.5
5°	1183.5	1180.9	1173.2	1183.5	1182.2
7.5°	1174.5	1174.5	1166.8	1179.6	1178.4
10°	1161.6	1164.2	1157.8	1170.6	1168.1
12.5°	1146.2	1150.0	1146.2	1157.8	1155.2
15°	1126.8	1130.7	1129.4	1142.3	1141.0
17.5°	1103.7	1111.4	1110.1	1121.7	1119.1
20°	1077.9	1085.6	1088.2	1099.8	1101.1
22.5°	1050.9	1058.6	1062.5	1077.9	1076.6
25°	1017.4	1030.3	1034.1	1050.9	1050.9
27.5°	985.2	999.4	1007.1	1021.2	1022.5
30°	950.4	967.2	977.5	992.9	992.9
32.5°	911.8	931.1	945.3	962.0	965.9
35°	875.7	896.3	913.1	932.4	937.5
37.5°	837.1	860.3	879.6	901.5	905.3
40°	798.5	821.6	847.4	869.3	874.4
42.5°	756.0	785.6	812.6	837.1	844.8
45°	716.0	746.9	779.1	803.6	813.9
47.5°	673.5	708.3	744.4	771.4	779.1
50°	632.3	668.4	708.3	737.9	746.9
52.5°	588.5	627.2	672.2	703.2	714.7
55°	546.0	588.5	634.9	669.7	680.0
57.5°	504.8	548.6	598.8	633.6	645.2
60°	461.0	507.4	560.2	596.3	610.4
62.5°	419.8	467.5	524.1	560.2	573.1
65°	377.3	427.6	484.2	522.9	535.7
67.5°	334.8	387.6	444.3	486.8	497.1
70°	289.8	345.1	407.0	448.2	461.0
72.5°	248.6	303.9	368.3	410.8	423.7
75°	204.8	265.3	329.7	372.2	387.6
77.5°	167.4	227.9	292.3	337.4	349.0
80°	127.5	190.6	257.6	301.4	314.2
82.5°	92.7	157.1	225.4	269.2	282.0
85°	63.1	127.5	195.7	239.5	252.4
87.5°	38.6	103.0	168.7	212.5	225.4
90°	16.7	79.8	145.5	189.3	202.2
92.5°	15.5	70.8	135.2	177.7	189.3
95°	14.2	64.4	127.5	167.4	180.3
97.5°	12.9	59.2	119.8	158.4	171.3
100°	11.6	52.8	112.0	149.4	162.3
102.5°	10.3	46.4	104.3	140.4	153.3
105°	10.3	41.2	96.6	132.6	144.2
107.5°	9.0	36.1	88.9	123.6	135.2
110°	7.7	30.9	82.4	115.9	126.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.7	25.8	74.7	106.9	118.5
115°	6.4	21.9	68.3	99.2	109.5
117.5°	6.4	16.7	60.5	91.4	101.7
120°	5.2	11.6	54.1	83.7	92.7
122.5°	5.2	7.7	47.6	76.0	85.0
125°	3.9	3.9	41.2	68.3	77.3
127.5°	3.9	2.6	34.8	60.5	69.5
130°	3.9	2.6	28.3	52.8	60.5
132.5°	2.6	2.6	21.9	45.1	54.1
135°	2.6	1.3	15.5	38.6	45.1
137.5°	2.6	1.3	10.3	30.9	37.3
140°	1.3	1.3	5.2	24.5	30.9
142.5°	1.3	0.0	0.0	16.7	23.2
145°	1.3	0.0	0.0	10.3	15.5
147.5°	0.0	0.0	0.0	3.9	9.0
150°	0.0	0.0	0.0	0.0	2.6
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)