

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: P242499

Luminaire Tested: **S123DR-S1000D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242499
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-S1000D830-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: 3708.3 lumens
Efficiency: N/A
Efficacy: 106.6 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

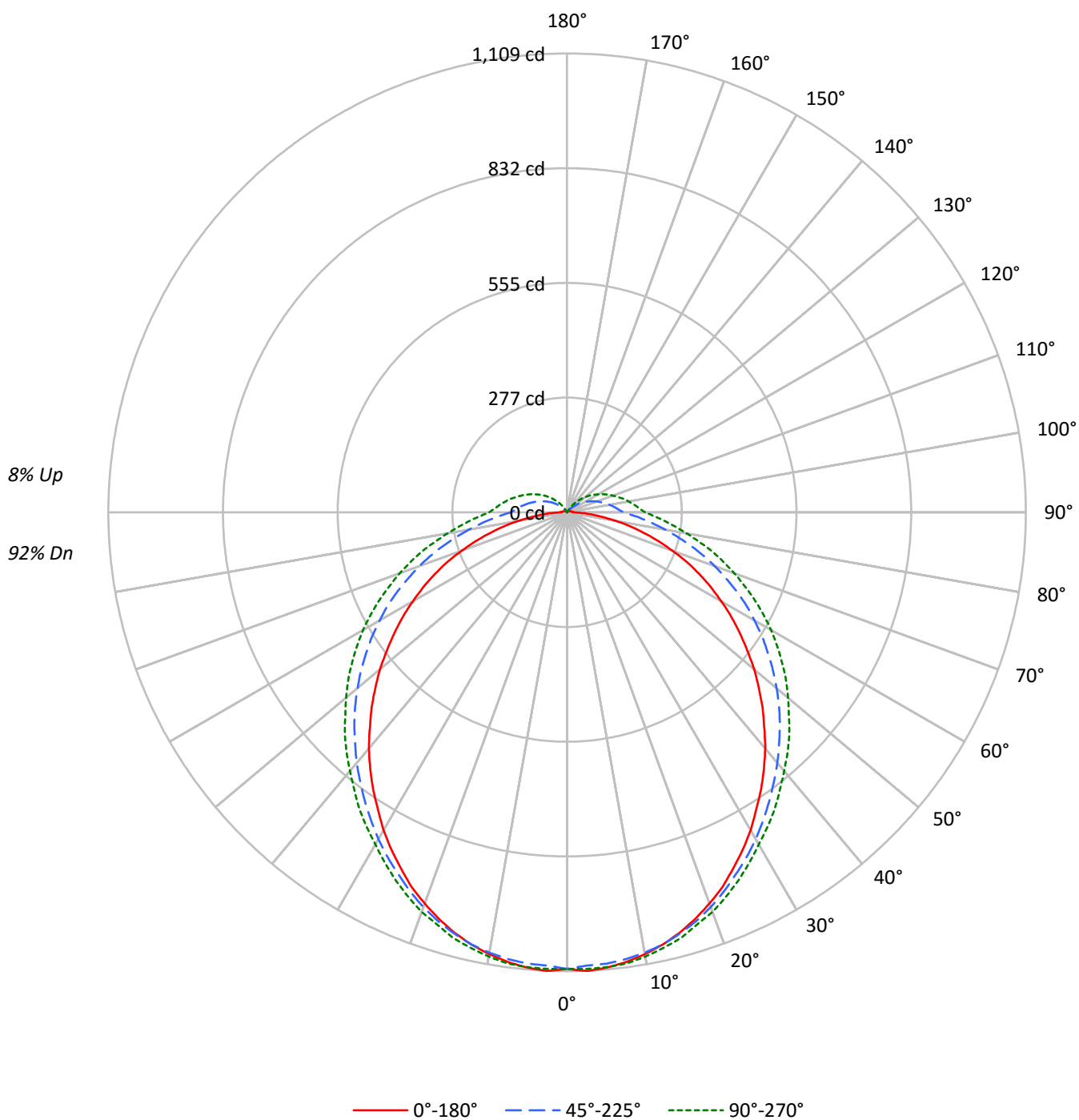
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242499

CATALOG NUMBER: S123DR-S1000D830-X4F0-XX-UDD-D-W

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°	13375	13375	13375
5°	13415	13013	13012
10°	13294	12691	12610
15°	13122	12328	12177
20°	12877	11920	11707
25°	12574	11454	11216
30°	12264	11034	10720
35°	11914	10591	10320
40°	11582	10187	9894
45°	11215	9798	9549
50°	10851	9412	9171
55°	10448	9017	8827
60°	10057	8614	8474
65°	9656	8182	8057
70°	9048	7699	7629
75°	8285	7147	7189
80°	7404	6595	6686
85°	6575	6178	6355

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.7	2.8
10°-20°	298.4	8.0
20°-30°	446.2	12.0
30°-40°	532.8	14.4
40°-50°	557.4	15.0
50°-60°	523.1	14.1
60°-70°	436.9	11.8
70°-80°	312.4	8.4
80°-90°	185.9	5.0
90°-100°	116.8	3.2
100°-110°	85.9	2.3
110°-120°	57.3	1.5
120°-130°	32.7	0.9
130°-140°	14.7	0.4
140°-150°	3.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	849.3	22.9
0°-40°	1382.1	37.3
0°-60°	2462.6	66.4
0°-90°	3397.8	91.6
90°-120°	260.0	7.0
90°-150°	310.5	8.4
90°-180°	310.0	8.4
0°-180°	3708.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1103	1103	1103	1103	1103	
5°	1105	1102	1095	1105	1103	105
15°	1052	1055	1054	1066	1065	296
25°	950	962	965	981	981	438
35°	817	837	852	870	875	511
45°	668	697	727	750	760	515
55°	510	549	593	625	635	456
65°	352	399	452	488	500	348
75°	191	248	308	347	362	204
85°	59	119	183	224	236	61
90°	16	74	136	177	189	11
95°	13	60	119	156	168	10
105°	10	38	90	124	135	10
115°	6	20	64	93	102	6
125°	4	4	38	64	72	4
135°	2	1	14	36	42	2
145°	1	0	0	10	14	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

TEST NUMBER: P242499

CATALOG NUMBER: S123DR-S1000D830-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1103.4	1103.4	1103.4	1103.4	1103.4
2.5°	1109.4	1105.8	1096.2	1105.8	1104.6
5°	1104.6	1102.2	1095.0	1104.6	1103.4
7.5°	1096.2	1096.2	1089.0	1101.0	1099.8
10°	1084.2	1086.6	1080.6	1092.6	1090.2
12.5°	1069.8	1073.4	1069.8	1080.6	1078.2
15°	1051.7	1055.3	1054.1	1066.2	1064.9
17.5°	1030.1	1037.3	1036.1	1046.9	1044.5
20°	1006.1	1013.3	1015.7	1026.5	1027.7
22.5°	980.8	988.0	991.6	1006.1	1004.9
25°	949.6	961.6	965.2	980.8	980.8
27.5°	919.5	932.7	939.9	953.2	954.4
30°	887.1	902.7	912.3	926.7	926.7
32.5°	851.0	869.0	882.2	897.9	901.5
35°	817.3	836.6	852.2	870.2	875.0
37.5°	781.3	802.9	820.9	841.4	845.0
40°	745.2	766.9	790.9	811.3	816.1
42.5°	705.6	733.2	758.4	781.3	788.5
45°	668.3	697.1	727.2	750.0	759.6
47.5°	628.6	661.1	694.7	720.0	727.2
50°	590.2	623.8	661.1	688.7	697.1
52.5°	549.3	585.4	627.4	656.3	667.1
55°	509.6	549.3	592.6	625.0	634.6
57.5°	471.2	512.0	558.9	591.4	602.2
60°	430.3	473.6	522.9	556.5	569.7
62.5°	391.8	436.3	489.2	522.9	534.9
65°	352.2	399.1	451.9	488.0	500.0
67.5°	312.5	361.8	414.7	454.3	464.0
70°	270.4	322.1	379.8	418.3	430.3
72.5°	232.0	283.7	343.8	383.4	395.4
75°	191.1	247.6	307.7	347.4	361.8
77.5°	156.3	212.7	272.8	314.9	325.7
80°	119.0	177.9	240.4	281.3	293.3
82.5°	86.5	146.6	210.3	251.2	263.2
85°	58.9	119.0	182.7	223.6	235.6
87.5°	36.1	96.2	157.5	198.3	210.3
90°	15.6	74.5	135.8	176.7	188.7
92.5°	14.4	66.1	126.2	165.9	176.7
95°	13.2	60.1	119.0	156.3	168.3
97.5°	12.0	55.3	111.8	147.8	159.9
100°	10.8	49.3	104.6	139.4	151.4
102.5°	9.6	43.3	97.4	131.0	143.0
105°	9.6	38.5	90.1	123.8	134.6
107.5°	8.4	33.7	82.9	115.4	126.2
110°	7.2	28.8	76.9	108.2	117.8



TEST NUMBER: P242499

CATALOG NUMBER: S123DR-S1000D830-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.2	24.0	69.7	99.8	110.6
115°	6.0	20.4	63.7	92.6	102.2
117.5°	6.0	15.6	56.5	85.3	95.0
120°	4.8	10.8	50.5	78.1	86.5
122.5°	4.8	7.2	44.5	70.9	79.3
125°	3.6	3.6	38.5	63.7	72.1
127.5°	3.6	2.4	32.5	56.5	64.9
130°	3.6	2.4	26.4	49.3	56.5
132.5°	2.4	2.4	20.4	42.1	50.5
135°	2.4	1.2	14.4	36.1	42.1
137.5°	2.4	1.2	9.6	28.8	34.9
140°	1.2	1.2	4.8	22.8	28.8
142.5°	1.2	0.0	0.0	15.6	21.6
145°	1.2	0.0	0.0	9.6	14.4
147.5°	0.0	0.0	0.0	3.6	8.4
150°	0.0	0.0	0.0	0.0	2.4
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)