

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: P242327

Luminaire Tested: **S122DR-S865D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-S865D830-X4F0-XX-UDD-D-W
Description: DEFINE 2 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: 3164.5 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

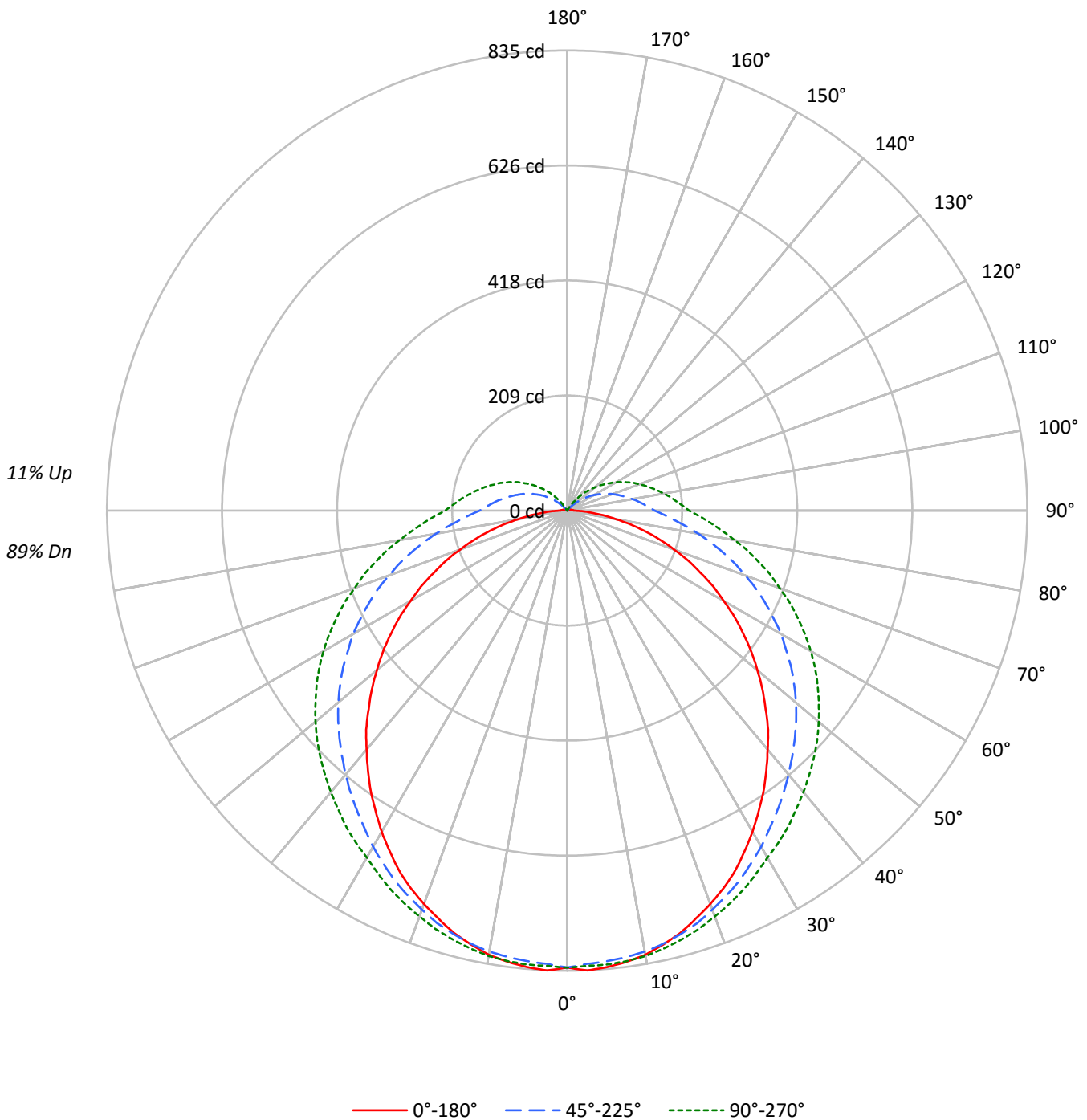
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242327

CATALOG NUMBER: S122DR-S865D830-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot





TEST NUMBER: P242327

CATALOG NUMBER: S122DR-S865D830-X4F0-XX-UDD-D-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72	69
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42	39
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31	29
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15798	15798	15798
5°	15875	15141	15060
10°	15771	14633	14424
15°	15554	14106	13772
20°	15278	13550	13151
25°	15007	13016	12586
30°	14623	12474	12027
35°	14235	11949	11617
40°	13827	11496	11212
45°	13438	11088	10858
50°	13022	10712	10510
55°	12585	10311	10154
60°	12050	9894	9780
65°	11495	9415	9349
70°	10869	8898	8883
75°	10069	8382	8444
80°	8809	7846	7990
85°	7596	7346	7603



TEST NUMBER: P242327

CATALOG NUMBER: S122DR-S865D830-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.6	2.5
10°-20°	225.5	7.1
20°-30°	341.7	10.8
30°-40°	416.1	13.1
40°-50°	447.6	14.1
50°-60°	434.7	13.7
60°-70°	379.6	12.0
70°-80°	292.2	9.2
80°-90°	195.7	6.2
90°-100°	135.0	4.3
100°-110°	98.6	3.1
110°-120°	65.1	2.1
120°-130°	36.3	1.1
130°-140°	15.2	0.5
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°	645.8	20.4
0°-40°	1061.8	33.6
0°-60°	1944.2	61.4
0°-90°	2811.8	88.9
90°-120°	298.7	9.4
90°-150°	352.8	11.1
90°-180°	353.0	11.2
0°-180°	3164.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	832	828	821	828	827	79
15°	793	796	796	806	805	223
25°	721	730	740	755	758	332
35°	621	642	665	691	700	388
45°	510	542	584	621	633	393
55°	391	434	496	540	555	349
65°	267	326	397	446	462	265
75°	148	215	292	344	359	156
85°	43	118	195	245	262	46
90°	12	82	159	207	221	8
95°	10	66	138	184	198	8
105°	6	41	103	145	159	7
115°	5	18	72	108	121	4
125°	2	2	41	73	84	3
135°	1	1	13	38	48	1
145°	0	0	0	7	13	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: P242327

CATALOG NUMBER: S122DR-S865D830-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	829.4	829.4	829.4	829.4	829.4
2.5°	835.4	831.8	823.4	829.4	827.0
5°	831.8	828.2	820.9	828.2	827.0
7.5°	825.8	823.4	817.3	825.8	824.6
10°	818.5	816.1	812.5	822.2	820.9
12.5°	806.5	807.7	805.3	814.9	813.7
15°	793.3	795.7	795.7	806.5	805.3
17.5°	776.5	781.3	784.9	795.7	795.7
20°	759.6	765.7	770.5	783.7	783.7
22.5°	741.6	748.8	756.0	769.3	771.7
25°	721.2	729.6	740.4	754.8	758.4
27.5°	697.1	710.4	722.4	740.4	742.8
30°	673.1	688.7	704.4	723.6	727.2
32.5°	646.7	664.7	683.9	706.8	714.0
35°	621.4	641.9	664.7	691.1	699.5
37.5°	593.8	616.6	645.5	674.3	682.7
40°	566.1	592.6	625.0	656.3	667.1
42.5°	539.7	566.1	604.6	639.5	650.3
45°	509.6	542.1	584.2	621.4	633.4
47.5°	480.8	515.6	563.7	602.2	615.4
50°	450.7	488.0	542.1	583.0	596.2
52.5°	421.9	461.6	519.3	561.3	575.7
55°	390.6	433.9	496.4	539.7	555.3
57.5°	360.6	408.7	471.2	518.1	533.7
60°	328.1	379.8	448.3	494.0	510.8
62.5°	299.3	353.4	421.9	471.2	486.8
65°	266.8	325.7	396.7	445.9	461.6
67.5°	238.0	299.3	371.4	420.7	437.5
70°	206.7	269.2	343.8	395.4	409.9
72.5°	177.9	242.8	318.5	369.0	387.0
75°	147.8	215.2	292.1	343.8	359.4
77.5°	119.0	188.7	266.8	318.5	335.4
80°	90.1	163.5	241.6	292.1	308.9
82.5°	66.1	138.2	217.6	268.0	283.7
85°	43.3	117.8	194.7	245.2	262.0
87.5°	26.4	98.6	175.5	224.8	240.4
90°	12.0	81.7	158.7	206.7	221.2
92.5°	10.8	74.5	147.8	194.7	209.1
95°	9.6	66.1	138.2	183.9	198.3
97.5°	8.4	60.1	129.8	174.3	188.7
100°	8.4	52.9	120.2	164.7	177.9
102.5°	7.2	46.9	111.8	155.1	168.3
105°	6.0	40.9	103.4	145.4	158.7
107.5°	6.0	34.9	95.0	135.8	149.0
110°	4.8	28.8	87.7	126.2	139.4



TEST NUMBER: P242327

CATALOG NUMBER: S122DR-S865D830-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.8	24.0	79.3	117.8	131.0
115°	4.8	18.0	72.1	108.2	121.4
117.5°	3.6	13.2	63.7	99.8	111.8
120°	3.6	8.4	56.5	90.1	103.4
122.5°	3.6	4.8	49.3	81.7	92.6
125°	2.4	2.4	40.9	73.3	84.1
127.5°	2.4	1.2	33.7	63.7	74.5
130°	2.4	1.2	26.4	55.3	64.9
132.5°	2.4	1.2	19.2	46.9	56.5
135°	1.2	1.2	13.2	38.5	48.1
137.5°	1.2	1.2	7.2	30.0	38.5
140°	1.2	0.0	2.4	21.6	28.8
142.5°	1.2	0.0	0.0	14.4	20.4
145°	0.0	0.0	0.0	7.2	13.2
147.5°	0.0	0.0	0.0	1.2	4.8
150°	0.0	0.0	0.0	0.0	0.0
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)