

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: P242346

Luminaire Tested: **S122DR-S865D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242346
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-S865D935-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2890.8 lumens
Efficiency: N/A
Efficacy: 83.1 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

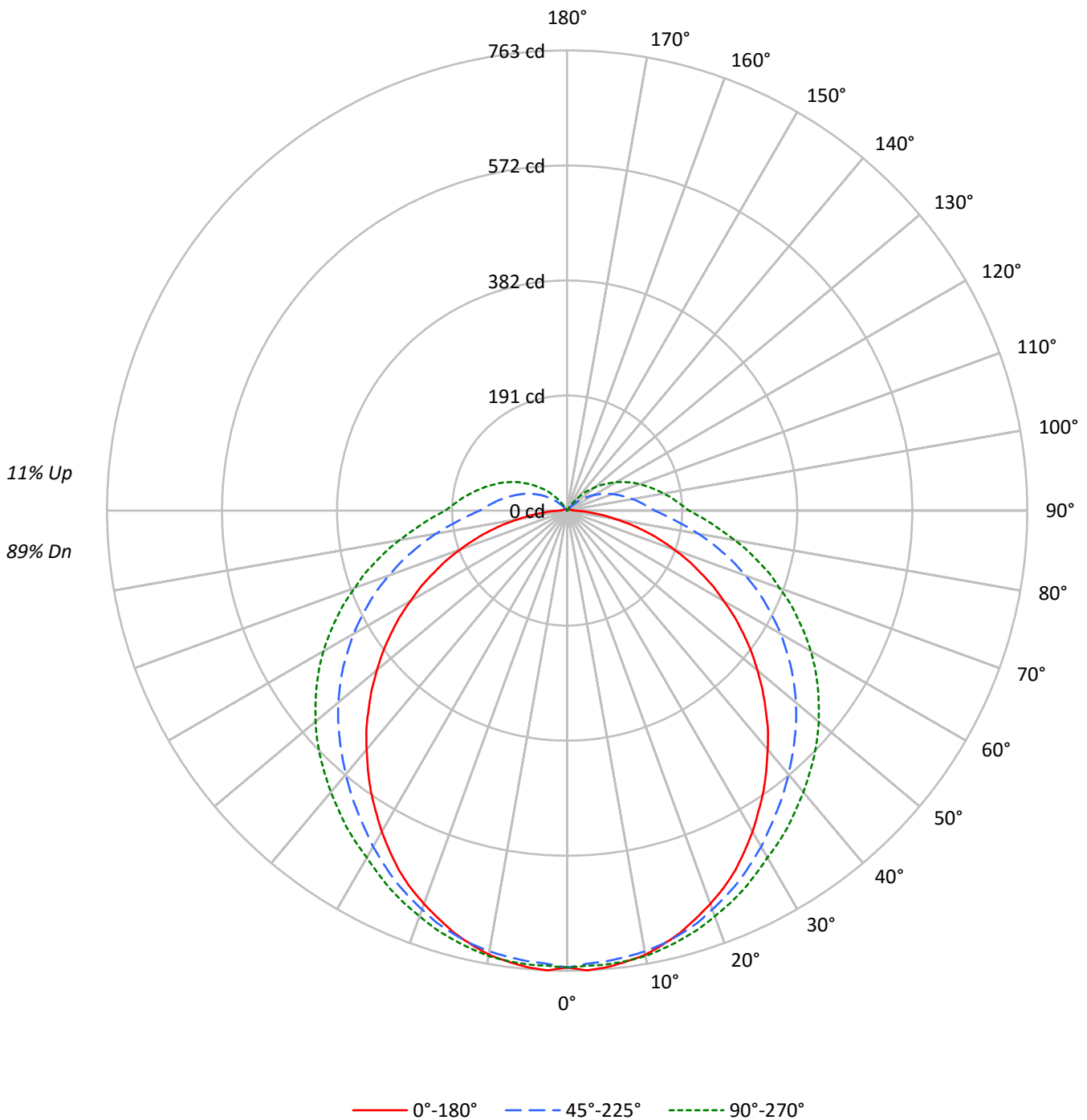
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: S122DR-S865D935-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	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°	14431	14431	14431
5°	14500	13831	13756
10°	14407	13367	13177
15°	14209	12887	12581
20°	13956	12377	12013
25°	13708	11891	11497
30°	13359	11393	10986
35°	13005	10915	10613
40°	12632	10503	10242
45°	12275	10128	9919
50°	11895	9785	9600
55°	11496	9420	9277
60°	11011	9037	8934
65°	10504	8598	8539
70°	9933	8126	8113
75°	9204	7656	7713
80°	8046	7167	7300
85°	6929	6713	6947



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.8	2.5
10°-20°	206.0	7.1
20°-30°	312.1	10.8
30°-40°	380.1	13.1
40°-50°	408.9	14.1
50°-60°	397.1	13.7
60°-70°	346.8	12.0
70°-80°	266.9	9.2
80°-90°	178.8	6.2
90°-100°	123.3	4.3
100°-110°	90.1	3.1
110°-120°	59.5	2.1
120°-130°	33.1	1.1
130°-140°	13.9	0.5
140°-150°	2.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	589.9	20.4
0°-40°	970.0	33.6
0°-60°	1776.0	61.4
0°-90°	2568.5	88.9
90°-120°	272.9	9.4
90°-150°	322.3	11.1
90°-180°	322.0	11.1
0°-180°	2890.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	760	756	750	756	755	72
15°	725	727	727	737	736	204
25°	659	666	676	690	693	303
35°	568	586	607	631	639	355
45°	466	495	534	568	579	359
55°	357	396	454	493	507	319
65°	244	298	362	407	422	242
75°	135	196	267	314	328	143
85°	40	108	178	224	239	42
90°	11	75	145	189	202	8
95°	9	60	126	168	181	7
105°	6	37	94	133	145	6
115°	4	16	66	99	111	4
125°	2	2	37	67	77	2
135°	1	1	12	35	44	1
145°	0	0	0	7	12	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	757.6	757.6	757.6	757.6	757.6
2.5°	763.1	759.8	752.1	757.6	755.4
5°	759.8	756.5	749.9	756.5	755.4
7.5°	754.3	752.1	746.6	754.3	753.2
10°	747.7	745.5	742.2	751.0	749.9
12.5°	736.7	737.8	735.7	744.4	743.3
15°	724.7	726.9	726.9	736.7	735.7
17.5°	709.3	713.7	717.0	726.9	726.9
20°	693.9	699.4	703.8	715.9	715.9
22.5°	677.5	684.0	690.6	702.7	704.9
25°	658.8	666.5	676.4	689.5	692.8
27.5°	636.8	648.9	659.9	676.4	678.6
30°	614.9	629.1	643.4	661.0	664.3
32.5°	590.7	607.2	624.8	645.6	652.2
35°	567.7	586.3	607.2	631.3	639.0
37.5°	542.4	563.3	589.6	616.0	623.7
40°	517.2	541.3	571.0	599.5	609.4
42.5°	493.0	517.2	552.3	584.1	594.0
45°	465.5	495.2	533.6	567.7	578.6
47.5°	439.2	471.0	515.0	550.1	562.2
50°	411.7	445.8	495.2	532.5	544.6
52.5°	385.4	421.6	474.3	512.8	525.9
55°	356.8	396.4	453.5	493.0	507.3
57.5°	329.4	373.3	430.4	473.2	487.5
60°	299.8	347.0	409.5	451.3	466.6
62.5°	273.4	322.8	385.4	430.4	444.7
65°	243.8	297.6	362.3	407.4	421.6
67.5°	217.4	273.4	339.3	384.3	399.7
70°	188.9	245.9	314.0	361.2	374.4
72.5°	162.5	221.8	291.0	337.1	353.6
75°	135.1	196.5	266.8	314.0	328.3
77.5°	108.7	172.4	243.8	291.0	306.3
80°	82.3	149.3	220.7	266.8	282.2
82.5°	60.4	126.3	198.7	244.9	259.1
85°	39.5	107.6	177.9	224.0	239.4
87.5°	24.2	90.0	160.3	205.3	219.6
90°	11.0	74.7	144.9	188.9	202.0
92.5°	9.9	68.1	135.1	177.9	191.0
95°	8.8	60.4	126.3	168.0	181.2
97.5°	7.7	54.9	118.6	159.2	172.4
100°	7.7	48.3	109.8	150.4	162.5
102.5°	6.6	42.8	102.1	141.6	153.7
105°	5.5	37.3	94.4	132.9	144.9
107.5°	5.5	31.8	86.7	124.1	136.2
110°	4.4	26.4	80.2	115.3	127.4



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CATALOG NUMBER: S122DR-S865D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	22.0	72.5	107.6	119.7
115°	4.4	16.5	65.9	98.8	110.9
117.5°	3.3	12.1	58.2	91.1	102.1
120°	3.3	7.7	51.6	82.3	94.4
122.5°	3.3	4.4	45.0	74.7	84.5
125°	2.2	2.2	37.3	67.0	76.9
127.5°	2.2	1.1	30.7	58.2	68.1
130°	2.2	1.1	24.2	50.5	59.3
132.5°	2.2	1.1	17.6	42.8	51.6
135°	1.1	1.1	12.1	35.1	43.9
137.5°	1.1	1.1	6.6	27.4	35.1
140°	1.1	0.0	2.2	19.8	26.4
142.5°	1.1	0.0	0.0	13.2	18.7
145°	0.0	0.0	0.0	6.6	12.1
147.5°	0.0	0.0	0.0	1.1	4.4
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)