

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: P333800

Luminaire Tested: **S122DW-S290D935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333800  
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: S122DW-S290D935-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 290 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 989.8 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

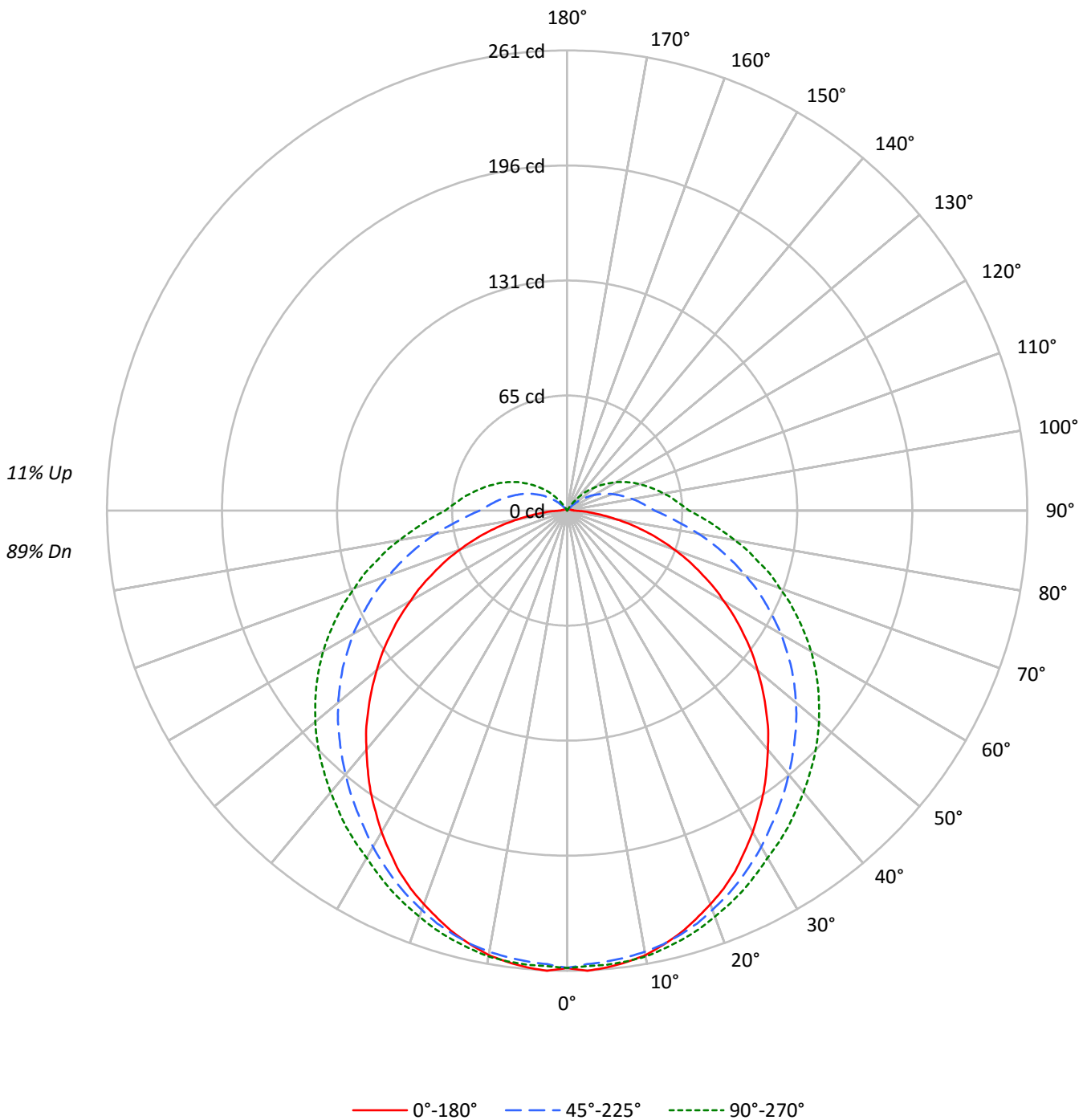
Input Watts (W): 11.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4188	4188	4188
5°	4216	4162	4191
10°	4197	4166	4210
15°	4147	4160	4211
20°	4082	4141	4211
25°	4019	4126	4226
30°	3924	4107	4240
35°	3832	4098	4313
40°	3733	4121	4397
45°	3640	4172	4523
50°	3542	4258	4685
55°	3440	4372	4890
60°	3313	4527	5160
65°	3190	4741	5517
70°	3054	5075	6052
75°	2882	5702	7012
80°	2622	7029	8982
85°	2501	11282	15191



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.6	2.5
10°-20°	70.5	7.1
20°-30°	106.9	10.8
30°-40°	130.1	13.1
40°-50°	140.0	14.1
50°-60°	136.0	13.7
60°-70°	118.8	12.0
70°-80°	91.4	9.2
80°-90°	61.2	6.2
90°-100°	42.2	4.3
100°-110°	30.8	3.1
110°-120°	20.4	2.1
120°-130°	11.3	1.1
130°-140°	4.8	0.5
140°-150°	0.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	202.0	20.4
0°-40°	332.1	33.6
0°-60°	608.1	61.4
0°-90°	879.4	88.9
90°-120°	93.4	9.4
90°-150°	110.3	11.1
90°-180°	110.0	11.1
0°-180°	989.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	259	259	259	259	259	
5°	260	259	257	259	259	25
15°	248	249	249	252	252	70
25°	226	228	232	236	237	104
35°	194	201	208	216	219	121
45°	159	170	183	194	198	123
55°	122	136	155	169	174	109
65°	84	102	124	140	144	83
75°	46	67	91	108	112	49
85°	14	37	61	77	82	14
90°	4	26	50	65	69	3
95°	3	21	43	58	62	2
105°	2	13	32	46	50	2
115°	2	6	23	34	38	1
125°	1	1	13	23	26	1
135°	0	0	4	12	15	0
145°	0	0	0	2	4	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: P333800

CATALOG NUMBER: S122DW-S290D935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	259.4	259.4	259.4	259.4	259.4
2.5°	261.3	260.1	257.5	259.4	258.6
5°	260.1	259.0	256.8	259.0	258.6
7.5°	258.3	257.5	255.6	258.3	257.9
10°	256.0	255.3	254.1	257.1	256.8
12.5°	252.3	252.6	251.9	254.9	254.5
15°	248.1	248.9	248.9	252.3	251.9
17.5°	242.9	244.4	245.5	248.9	248.9
20°	237.6	239.5	241.0	245.1	245.1
22.5°	232.0	234.2	236.5	240.6	241.3
25°	225.6	228.2	231.6	236.1	237.2
27.5°	218.0	222.2	225.9	231.6	232.3
30°	210.5	215.4	220.3	226.3	227.4
32.5°	202.3	207.9	213.9	221.0	223.3
35°	194.4	200.7	207.9	216.2	218.8
37.5°	185.7	192.9	201.9	210.9	213.5
40°	177.1	185.3	195.5	205.3	208.6
42.5°	168.8	177.1	189.1	200.0	203.4
45°	159.4	169.5	182.7	194.4	198.1
47.5°	150.4	161.3	176.3	188.3	192.5
50°	141.0	152.6	169.5	182.3	186.5
52.5°	132.0	144.4	162.4	175.6	180.1
55°	122.2	135.7	155.3	168.8	173.7
57.5°	112.8	127.8	147.4	162.0	166.9
60°	102.6	118.8	140.2	154.5	159.8
62.5°	93.6	110.5	132.0	147.4	152.3
65°	83.5	101.9	124.1	139.5	144.4
67.5°	74.4	93.6	116.2	131.6	136.8
70°	64.7	84.2	107.5	123.7	128.2
72.5°	55.6	75.9	99.6	115.4	121.1
75°	46.2	67.3	91.4	107.5	112.4
77.5°	37.2	59.0	83.5	99.6	104.9
80°	28.2	51.1	75.6	91.4	96.6
82.5°	20.7	43.2	68.0	83.8	88.7
85°	13.5	36.8	60.9	76.7	82.0
87.5°	8.3	30.8	54.9	70.3	75.2
90°	3.8	25.6	49.6	64.7	69.2
92.5°	3.4	23.3	46.2	60.9	65.4
95°	3.0	20.7	43.2	57.5	62.0
97.5°	2.6	18.8	40.6	54.5	59.0
100°	2.6	16.5	37.6	51.5	55.6
102.5°	2.3	14.7	35.0	48.5	52.6
105°	1.9	12.8	32.3	45.5	49.6
107.5°	1.9	10.9	29.7	42.5	46.6
110°	1.5	9.0	27.4	39.5	43.6



TEST NUMBER: P333800

CATALOG NUMBER: S122DW-S290D935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.5	7.5	24.8	36.8	41.0
115°	1.5	5.6	22.6	33.8	38.0
117.5°	1.1	4.1	19.9	31.2	35.0
120°	1.1	2.6	17.7	28.2	32.3
122.5°	1.1	1.5	15.4	25.6	28.9
125°	0.8	0.8	12.8	22.9	26.3
127.5°	0.8	0.4	10.5	19.9	23.3
130°	0.8	0.4	8.3	17.3	20.3
132.5°	0.8	0.4	6.0	14.7	17.7
135°	0.4	0.4	4.1	12.0	15.0
137.5°	0.4	0.4	2.3	9.4	12.0
140°	0.4	0.0	0.8	6.8	9.0
142.5°	0.4	0.0	0.0	4.5	6.4
145°	0.0	0.0	0.0	2.3	4.1
147.5°	0.0	0.0	0.0	0.4	1.5
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)