

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: P243011

Luminaire Tested: **S121DR-H1025D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243011  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-52)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-H1025D927-X4F0-XX-UDD-D-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3084.6 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.34 / 1.43  
Luminous Opening: Rectangular w/ Sides (W: 0.09' x L: 3.88' x H: 0.08')  
CIE Type: Semi-Direct

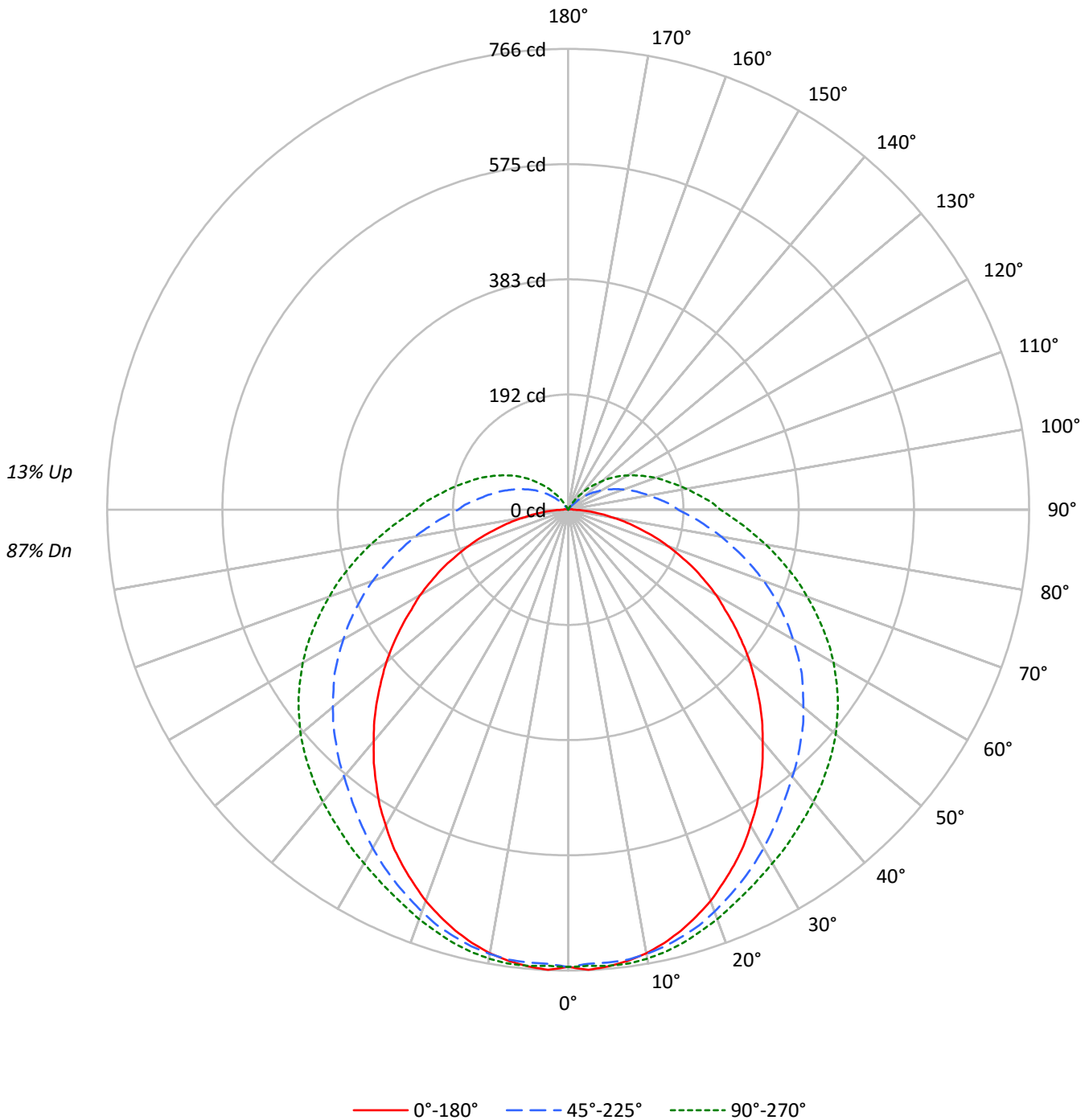
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P243011

CATALOG NUMBER: S121DR-H1025D927-X4F0-XX-UDD-D-W

### Luminous Intensity Polar Plot





TEST NUMBER: P243011

CATALOG NUMBER: S121DR-H1025D927-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	104	104	104	97	97	97	90	90	90	87
1	103	97	92	87	99	94	89	84	87	83	79	81	78	75	75	72	70	67
2	93	83	75	69	89	80	73	67	74	69	63	69	64	60	64	60	57	54
3	84	72	63	56	80	70	61	55	65	58	52	60	54	50	56	51	47	44
4	76	64	54	47	73	61	53	46	57	50	44	53	47	42	49	44	40	37
5	70	56	47	40	67	54	46	39	51	43	37	47	41	36	44	39	34	32
6	65	51	41	34	62	49	40	34	46	38	32	43	36	31	40	34	30	27
7	60	46	37	30	57	44	36	30	41	34	29	39	32	27	36	31	26	24
8	55	42	33	27	53	40	32	26	38	31	25	36	29	24	33	28	23	21
9	52	38	30	24	50	37	29	24	35	28	23	33	26	22	31	25	21	19
10	48	35	27	22	47	34	26	21	32	25	21	30	24	20	29	23	19	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	22519	22519	22519
5°	22627	21273	21004
10°	22444	20262	19708
15°	22091	19211	18442
20°	21650	18161	17256
25°	21101	17146	16200
30°	20486	16203	15343
35°	19813	15309	14632
40°	19092	14551	14046
45°	18422	13919	13497
50°	17730	13311	12994
55°	16920	12747	12453
60°	16231	12082	11882
65°	15461	11454	11264
70°	14405	10808	10629
75°	13109	10124	10015
80°	11528	9484	9411
85°	10042	8884	8859



TEST NUMBER: P243011

CATALOG NUMBER: S121DR-H1025D927-X4F0-XX-UDD-D-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.3	2.3
10°-20°	207.7	6.7
20°-30°	314.2	10.2
30°-40°	384.0	12.4
40°-50°	416.8	13.5
50°-60°	411.4	13.3
60°-70°	368.5	11.9
70°-80°	296.5	9.6
80°-90°	214.3	6.9
90°-100°	153.4	5.0
100°-110°	109.5	3.6
110°-120°	72.5	2.3
120°-130°	41.2	1.3
130°-140°	18.4	0.6
140°-150°	3.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	594.2	19.3
0°-40°	978.1	31.7
0°-60°	1806.3	58.6
0°-90°	2685.5	87.1
90°-120°	335.4	10.9
90°-150°	399.0	12.9
90°-180°	399.0	12.9
0°-180°	3084.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	760	760	760	760	760	
5°	762	760	756	763	761	72
15°	724	732	734	744	744	204
25°	652	669	682	698	701	300
35°	556	585	614	646	656	348
45°	449	491	546	593	608	347
55°	338	394	474	528	547	302
65°	231	302	389	449	467	227
75°	124	208	301	360	378	132
85°	37	125	218	274	291	38
90°	9	94	183	237	253	6
95°	7	75	159	211	226	5
105°	3	45	117	162	175	4
115°	2	21	80	122	134	2
125°	1	2	49	84	95	1
135°	0	0	19	47	56	0
145°	0	0	0	12	20	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: P243011

CATALOG NUMBER: S121DR-H1025D927-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	760.0	760.0	760.0	760.0	760.0
2.5°	765.5	761.1	755.5	761.1	758.8
5°	762.2	760.0	755.5	763.3	761.1
7.5°	756.6	756.6	754.4	762.2	761.1
10°	748.8	751.0	749.9	758.8	757.7
12.5°	737.7	742.1	743.2	753.3	752.2
15°	724.3	732.1	734.3	744.4	744.4
17.5°	708.7	718.7	724.3	734.3	734.3
20°	692.0	703.1	710.9	723.2	724.3
22.5°	671.9	687.5	696.4	710.9	712.0
25°	651.9	668.6	681.9	697.5	700.9
27.5°	630.7	649.6	666.3	684.2	689.7
30°	606.2	627.3	649.6	670.8	678.6
32.5°	582.8	607.3	631.8	658.5	668.6
35°	556.0	585.0	614.0	646.3	656.3
37.5°	530.4	561.6	596.1	632.9	645.2
40°	502.5	538.2	579.4	620.7	634.0
42.5°	476.9	513.7	563.8	606.2	621.8
45°	449.1	491.4	546.0	592.8	608.4
47.5°	421.2	466.9	529.3	577.2	595.0
50°	394.5	442.4	510.3	562.7	580.5
52.5°	365.5	420.1	491.4	544.9	563.8
55°	337.6	394.5	473.6	528.2	547.1
57.5°	308.7	373.3	452.4	510.3	528.2
60°	284.1	348.8	431.2	490.3	509.2
62.5°	256.3	325.4	411.2	469.1	489.2
65°	230.7	302.0	388.9	449.1	466.9
67.5°	201.7	278.6	367.7	426.8	444.6
70°	176.1	255.2	345.4	404.5	422.3
72.5°	150.4	232.9	323.1	383.3	401.1
75°	123.7	208.4	300.9	359.9	377.7
77.5°	100.3	186.1	278.6	337.6	355.5
80°	75.8	163.8	258.5	316.5	333.2
82.5°	55.7	143.7	237.3	295.3	310.9
85°	36.8	124.8	218.4	274.1	290.8
87.5°	21.2	108.1	199.5	255.2	270.8
90°	8.9	93.6	182.7	237.3	252.9
92.5°	6.7	84.7	172.7	225.1	240.7
95°	6.7	74.7	159.3	210.6	226.2
97.5°	5.6	65.7	147.1	197.2	211.7
100°	4.5	57.9	137.1	185.0	199.5
102.5°	4.5	51.3	125.9	172.7	187.2
105°	3.3	44.6	117.0	161.6	174.9
107.5°	3.3	37.9	107.0	151.5	164.9
110°	2.2	32.3	98.1	141.5	154.9



TEST NUMBER: P243011

CATALOG NUMBER: S121DR-H1025D927-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.2	26.7	89.1	131.5	143.7
115°	2.2	21.2	80.2	121.5	133.7
117.5°	1.1	15.6	72.4	111.4	123.7
120°	1.1	11.1	64.6	101.4	113.7
122.5°	1.1	5.6	55.7	92.5	104.7
125°	1.1	2.2	49.0	83.6	94.7
127.5°	0.0	0.0	41.2	73.5	84.7
130°	0.0	0.0	33.4	64.6	74.7
132.5°	0.0	0.0	26.7	55.7	64.6
135°	0.0	0.0	18.9	46.8	55.7
137.5°	0.0	0.0	12.3	37.9	46.8
140°	0.0	0.0	5.6	29.0	36.8
142.5°	0.0	0.0	1.1	21.2	27.9
145°	0.0	0.0	0.0	12.3	20.1
147.5°	0.0	0.0	0.0	4.5	11.1
150°	0.0	0.0	0.0	0.0	3.3
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)