

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: P243181

Luminaire Tested: **S122DR-H675D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243181  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DR-H675D927-X4F0-XX-UDD-D-W  
Description: DEFINE 2 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: 2037.9 lumens  
Efficiency: N/A  
Efficacy: 86.3 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

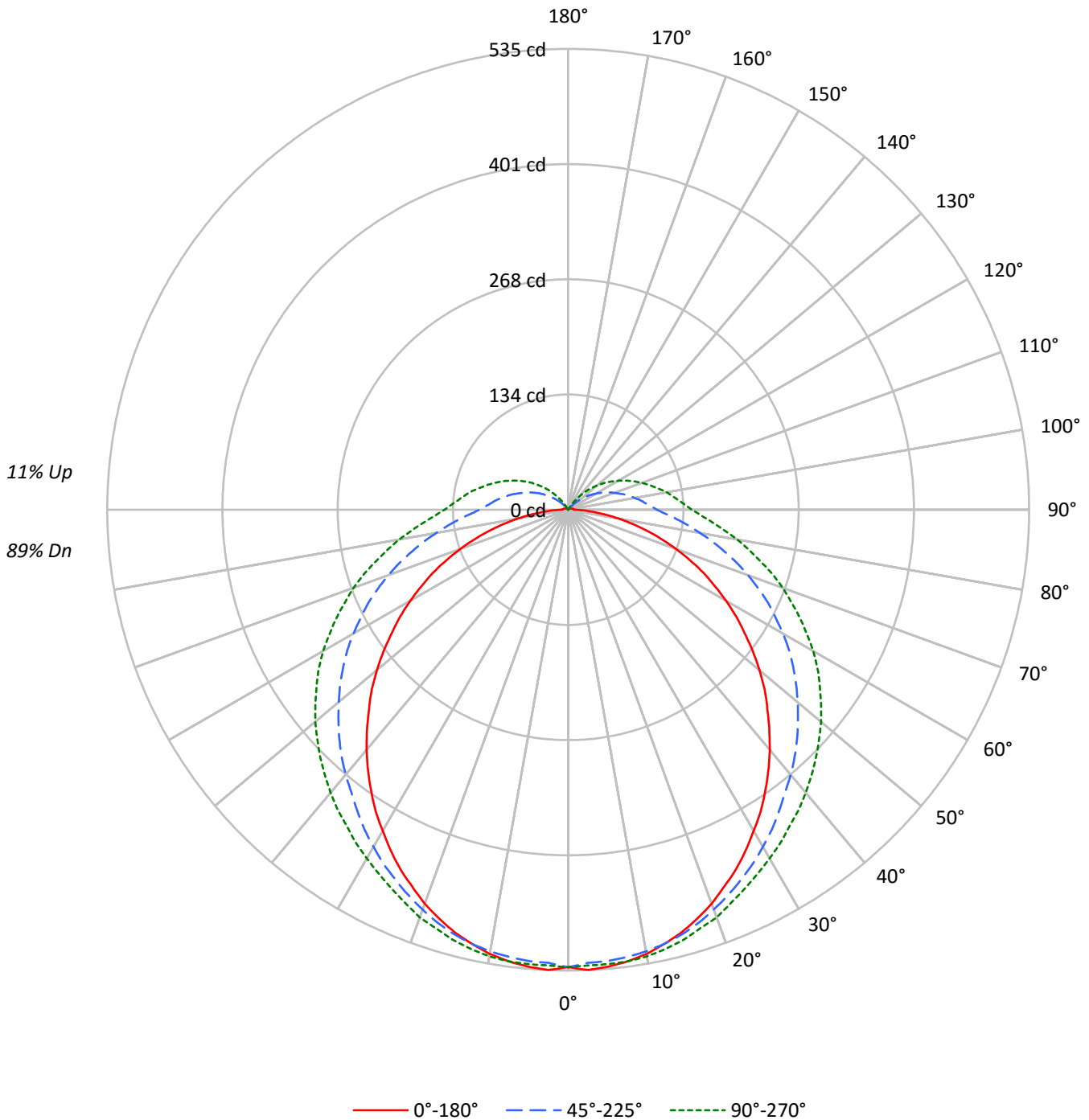
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	84	81	82	79	76	77	74	72	69
2	93	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	41	39
5	71	57	48	41	68	55	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	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	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°	10116	10116	10116
5°	10163	9700	9644
10°	10091	9378	9253
15°	9962	9048	8841
20°	9789	8690	8452
25°	9588	8335	8052
30°	9352	8002	7732
35°	9133	7672	7444
40°	8888	7387	7210
45°	8620	7131	6973
50°	8376	6869	6753
55°	8055	6622	6519
60°	7768	6349	6288
65°	7458	6073	6007
70°	6999	5743	5738
75°	6499	5392	5422
80°	5788	5043	5148
85°	5052	4773	4872



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.4	2.5
10°-20°	144.6	7.1
20°-30°	219.0	10.7
30°-40°	267.1	13.1
40°-50°	287.4	14.1
50°-60°	279.4	13.7
60°-70°	244.3	12.0
70°-80°	188.1	9.2
80°-90°	126.4	6.2
90°-100°	87.5	4.3
100°-110°	64.3	3.2
110°-120°	42.8	2.1
120°-130°	24.2	1.2
130°-140°	10.4	0.5
140°-150°	1.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	413.9	20.3
0°-40°	681.0	33.4
0°-60°	1247.9	61.2
0°-90°	1806.7	88.7
90°-120°	194.6	9.5
90°-150°	231.2	11.3
90°-180°	231.0	11.3
0°-180°	2037.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	532	530	526	530	530	51
15°	508	510	510	517	517	143
25°	461	468	474	484	485	212
35°	399	412	427	443	448	249
45°	327	347	376	399	407	253
55°	250	280	319	348	356	224
65°	173	210	256	287	297	171
75°	95	139	188	221	231	101
85°	29	76	126	158	168	30
90°	8	53	103	134	144	5
95°	6	43	90	119	128	5
105°	4	27	68	95	103	5
115°	3	13	47	71	79	3
125°	2	2	28	48	56	2
135°	1	1	10	26	32	1
145°	1	0	0	6	9	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°	531.1	531.1	531.1	531.1	531.1
2.5°	534.8	532.5	526.6	531.1	529.6
5°	532.5	530.3	525.9	530.3	529.6
7.5°	528.8	527.4	523.7	529.6	528.8
10°	523.7	522.9	520.7	526.6	526.6
12.5°	516.3	517.0	516.3	522.9	522.2
15°	508.1	510.4	510.4	517.0	517.0
17.5°	497.8	501.5	503.0	510.4	509.6
20°	486.7	491.1	494.1	502.2	503.7
22.5°	473.4	480.0	484.5	493.3	494.1
25°	460.8	468.2	474.1	484.5	485.2
27.5°	446.0	454.9	463.8	474.1	476.3
30°	430.5	441.6	451.9	464.5	467.5
32.5°	415.7	426.8	440.1	453.4	458.6
35°	398.7	412.0	426.8	443.0	448.2
37.5°	381.7	395.7	413.5	432.7	439.3
40°	363.9	380.2	401.6	422.3	429.0
42.5°	345.4	363.2	389.1	410.5	417.9
45°	326.9	346.9	375.7	398.7	406.8
47.5°	309.2	330.6	361.7	387.6	395.0
50°	289.9	313.6	347.6	374.3	383.1
52.5°	270.0	296.6	333.6	360.9	369.8
55°	250.0	279.6	318.8	347.6	356.5
57.5°	231.5	262.6	304.0	332.8	343.2
60°	211.5	244.8	287.7	318.0	328.4
62.5°	191.6	227.8	271.4	302.5	312.1
65°	173.1	210.1	255.9	287.0	296.6
67.5°	152.4	191.6	238.9	271.4	280.3
70°	133.1	174.6	221.9	254.4	264.8
72.5°	113.9	156.1	204.9	237.4	248.5
75°	95.4	139.1	187.9	221.2	230.8
77.5°	76.2	122.0	171.6	204.9	214.5
80°	59.2	105.0	155.3	188.6	199.0
82.5°	42.2	89.5	140.5	173.1	182.7
85°	28.8	76.2	126.5	158.3	167.9
87.5°	17.0	63.6	113.2	145.0	154.6
90°	8.1	53.3	102.8	133.9	143.5
92.5°	6.7	48.1	95.4	125.7	135.4
95°	5.9	42.9	89.5	119.1	128.0
97.5°	5.9	39.2	84.3	113.2	122.0
100°	5.2	34.8	78.4	106.5	116.1
102.5°	5.2	30.3	73.2	100.6	109.5
105°	4.4	26.6	68.0	94.7	102.8
107.5°	3.7	22.9	62.1	88.8	96.9
110°	3.7	19.2	57.0	82.8	91.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	16.3	52.5	76.9	85.1
115°	3.0	12.6	47.3	71.0	79.1
117.5°	3.0	8.9	42.2	65.1	73.2
120°	2.2	5.9	37.7	59.9	67.3
122.5°	2.2	3.7	32.5	54.0	61.4
125°	2.2	1.5	28.1	48.1	55.5
127.5°	1.5	1.5	22.9	42.9	49.6
130°	1.5	0.7	18.5	37.0	43.6
132.5°	1.5	0.7	14.1	31.8	37.7
135°	0.7	0.7	9.6	25.9	32.5
137.5°	0.7	0.7	5.2	20.7	25.9
140°	0.7	0.0	2.2	15.5	20.0
142.5°	0.7	0.0	0.0	10.4	14.8
145°	0.7	0.0	0.0	5.9	8.9
147.5°	0.0	0.0	0.0	1.5	4.4
150°	0.0	0.0	0.0	0.0	0.7
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)