

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: P242337

Luminaire Tested: **S122DR-S1005D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242337  
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-S1005D840-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3940.5 lumens  
Efficiency: N/A  
Efficacy: 95.9 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

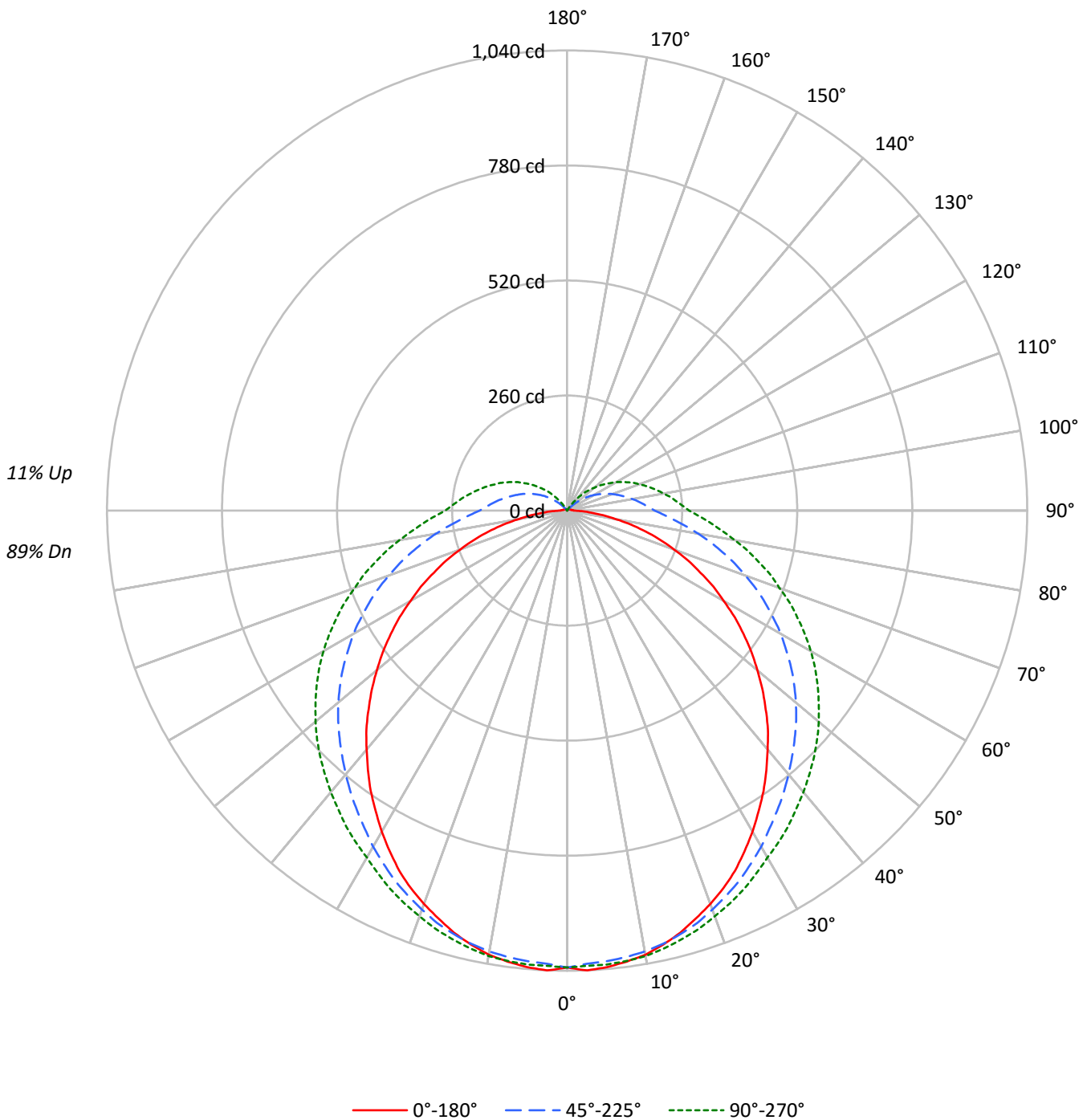
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	19671	19671	19671
5°	19766	18853	18751
10°	19640	18223	17961
15°	19367	17565	17149
20°	19025	16873	16374
25°	18686	16209	15672
30°	18210	15532	14975
35°	17726	14879	14467
40°	17217	14316	13961
45°	16735	13806	13522
50°	16217	13338	13087
55°	15671	12839	12645
60°	15007	12321	12179
65°	14317	11722	11639
70°	13535	11079	11061
75°	12542	10437	10513
80°	10979	9769	9951
85°	9456	9150	9469



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.9	2.5
10°-20°	280.8	7.1
20°-30°	425.4	10.8
30°-40°	518.1	13.1
40°-50°	557.4	14.1
50°-60°	541.3	13.7
60°-70°	472.7	12.0
70°-80°	363.8	9.2
80°-90°	243.7	6.2
90°-100°	168.1	4.3
100°-110°	122.8	3.1
110°-120°	81.1	2.1
120°-130°	45.2	1.1
130°-140°	19.0	0.5
140°-150°	3.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	804.1	20.4
0°-40°	1322.2	33.6
0°-60°	2420.9	61.4
0°-90°	3501.2	88.9
90°-120°	372.0	9.4
90°-150°	439.3	11.1
90°-180°	439.0	11.1
0°-180°	3940.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1033	1033	1033	1033	1033	
5°	1036	1031	1022	1031	1030	98
15°	988	991	991	1004	1003	278
25°	898	908	922	940	944	413
35°	774	799	828	861	871	484
45°	635	675	727	774	789	490
55°	486	540	618	672	692	435
65°	332	406	494	555	575	330
75°	184	268	364	428	448	195
85°	54	147	242	305	326	57
90°	15	102	198	257	275	10
95°	12	82	172	229	247	9
105°	8	51	129	181	198	9
115°	6	22	90	135	151	5
125°	3	3	51	91	105	3
135°	2	2	16	48	60	2
145°	0	0	0	9	16	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°	1032.7	1032.7	1032.7	1032.7	1032.7
2.5°	1040.2	1035.7	1025.2	1032.7	1029.7
5°	1035.7	1031.2	1022.2	1031.2	1029.7
7.5°	1028.2	1025.2	1017.8	1028.2	1026.7
10°	1019.3	1016.3	1011.8	1023.7	1022.2
12.5°	1004.3	1005.8	1002.8	1014.8	1013.3
15°	987.8	990.8	990.8	1004.3	1002.8
17.5°	966.9	972.9	977.3	990.8	990.8
20°	945.9	953.4	959.4	975.8	975.8
22.5°	923.5	932.4	941.4	957.9	960.9
25°	898.0	908.5	922.0	939.9	944.4
27.5°	868.1	884.5	899.5	922.0	925.0
30°	838.2	857.6	877.1	901.0	905.5
32.5°	805.2	827.7	851.6	880.1	889.0
35°	773.8	799.2	827.7	860.6	871.1
37.5°	739.4	767.8	803.7	839.6	850.1
40°	704.9	737.9	778.3	817.2	830.7
42.5°	672.0	704.9	752.8	796.2	809.7
45°	634.6	675.0	727.4	773.8	788.8
47.5°	598.7	642.1	702.0	749.8	766.3
50°	561.3	607.7	675.0	725.9	742.4
52.5°	525.3	574.7	646.6	699.0	716.9
55°	486.4	540.3	618.1	672.0	691.5
57.5°	449.0	508.9	586.7	645.1	664.5
60°	408.6	473.0	558.3	615.1	636.1
62.5°	372.7	440.0	525.3	586.7	606.2
65°	332.3	405.6	493.9	555.3	574.7
67.5°	296.3	372.7	462.5	523.8	544.8
70°	257.4	335.3	428.1	492.4	510.4
72.5°	221.5	302.3	396.6	459.5	481.9
75°	184.1	267.9	363.7	428.1	447.5
77.5°	148.2	235.0	332.3	396.6	417.6
80°	112.3	203.6	300.8	363.7	384.7
82.5°	82.3	172.1	270.9	333.8	353.2
85°	53.9	146.7	242.5	305.3	326.3
87.5°	32.9	122.7	218.5	279.9	299.3
90°	15.0	101.8	197.6	257.4	275.4
92.5°	13.5	92.8	184.1	242.5	260.4
95°	12.0	82.3	172.1	229.0	247.0
97.5°	10.5	74.8	161.6	217.0	235.0
100°	10.5	65.9	149.7	205.0	221.5
102.5°	9.0	58.4	139.2	193.1	209.5
105°	7.5	50.9	128.7	181.1	197.6
107.5°	7.5	43.4	118.2	169.1	185.6
110°	6.0	35.9	109.3	157.2	173.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.0	29.9	98.8	146.7	163.1
115°	6.0	22.5	89.8	134.7	151.2
117.5°	4.5	16.5	79.3	124.2	139.2
120°	4.5	10.5	70.3	112.3	128.7
122.5°	4.5	6.0	61.4	101.8	115.2
125°	3.0	3.0	50.9	91.3	104.8
127.5°	3.0	1.5	41.9	79.3	92.8
130°	3.0	1.5	32.9	68.8	80.8
132.5°	3.0	1.5	23.9	58.4	70.3
135°	1.5	1.5	16.5	47.9	59.9
137.5°	1.5	1.5	9.0	37.4	47.9
140°	1.5	0.0	3.0	26.9	35.9
142.5°	1.5	0.0	0.0	18.0	25.4
145°	0.0	0.0	0.0	9.0	16.5
147.5°	0.0	0.0	0.0	1.5	6.0
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)