

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: P242342

Luminaire Tested: **S122DR-S1005D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242342  
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-S1005D930-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3181.3 lumens  
Efficiency: N/A  
Efficacy: 77.4 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

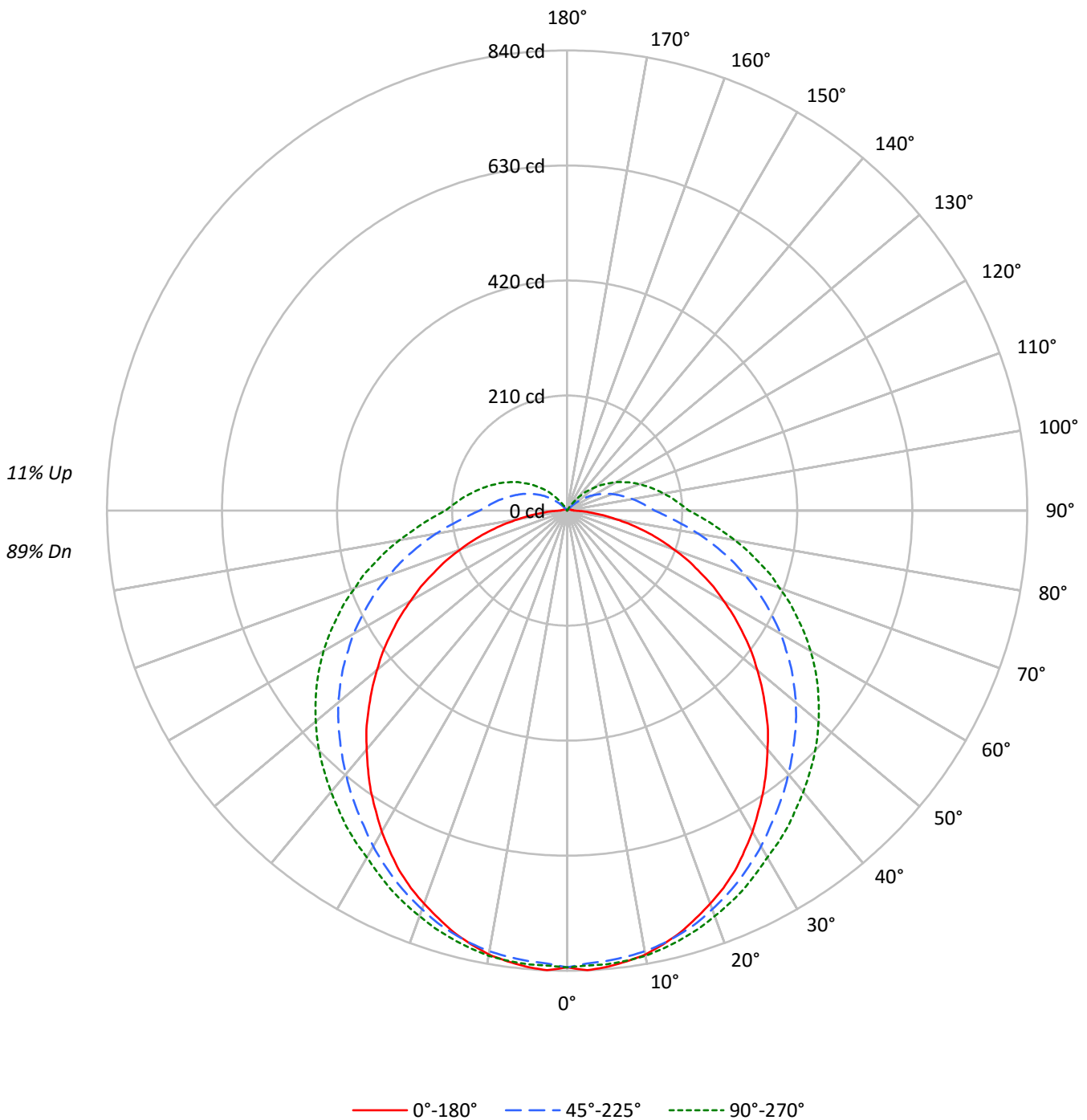
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	15882	15882	15882
5°	15959	15222	15138
10°	15856	14711	14501
15°	15636	14181	13845
20°	15360	13621	13219
25°	15086	13085	12654
30°	14701	12539	12090
35°	14311	12011	11680
40°	13900	11557	11271
45°	13510	11147	10916
50°	13091	10769	10565
55°	12652	10365	10209
60°	12116	9947	9832
65°	11559	9465	9397
70°	10927	8944	8928
75°	10124	8425	8488
80°	8858	7888	8032
85°	7631	7388	7644



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.0	2.5
10°-20°	226.7	7.1
20°-30°	343.5	10.8
30°-40°	418.3	13.1
40°-50°	450.0	14.1
50°-60°	437.0	13.7
60°-70°	381.7	12.0
70°-80°	293.7	9.2
80°-90°	196.8	6.2
90°-100°	135.7	4.3
100°-110°	99.1	3.1
110°-120°	65.4	2.1
120°-130°	36.5	1.1
130°-140°	15.3	0.5
140°-150°	2.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	649.2	20.4
0°-40°	1067.5	33.6
0°-60°	1954.5	61.4
0°-90°	2826.7	88.9
90°-120°	300.3	9.4
90°-150°	354.7	11.1
90°-180°	355.0	11.2
0°-180°	3181.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	834	834	834	834	834	
5°	836	832	825	832	831	79
15°	798	800	800	811	810	225
25°	725	734	744	759	762	333
35°	625	645	668	695	703	390
45°	512	545	587	625	637	396
55°	393	436	499	542	558	351
65°	268	328	399	448	464	267
75°	149	216	294	346	361	157
85°	44	118	196	246	263	46
90°	12	82	160	208	222	8
95°	10	66	139	185	199	8
105°	6	41	104	146	160	7
115°	5	18	72	109	122	4
125°	2	2	41	74	85	3
135°	1	1	13	39	48	1
145°	0	0	0	7	13	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°	833.8	833.8	833.8	833.8	833.8
2.5°	839.8	836.2	827.7	833.8	831.3
5°	836.2	832.5	825.3	832.5	831.3
7.5°	830.1	827.7	821.7	830.1	828.9
10°	822.9	820.5	816.8	826.5	825.3
12.5°	810.8	812.0	809.6	819.3	818.0
15°	797.5	799.9	799.9	810.8	809.6
17.5°	780.6	785.4	789.0	799.9	799.9
20°	763.7	769.7	774.5	787.8	787.8
22.5°	745.5	752.8	760.0	773.3	775.8
25°	725.0	733.5	744.3	758.8	762.5
27.5°	700.8	714.1	726.2	744.3	746.8
30°	676.7	692.4	708.1	727.4	731.0
32.5°	650.1	668.2	687.5	710.5	717.8
35°	624.7	645.3	668.2	694.8	703.3
37.5°	596.9	619.9	648.9	677.9	686.3
40°	569.1	595.7	628.3	659.8	670.6
42.5°	542.5	569.1	607.8	642.8	653.7
45°	512.3	545.0	587.3	624.7	636.8
47.5°	483.3	518.4	566.7	605.4	618.7
50°	453.1	490.6	545.0	586.0	599.3
52.5°	424.1	464.0	522.0	564.3	578.8
55°	392.7	436.2	499.0	542.5	558.3
57.5°	362.5	410.8	473.7	520.8	536.5
60°	329.9	381.8	450.7	496.6	513.5
62.5°	300.9	355.3	424.1	473.7	489.4
65°	268.3	327.5	398.8	448.3	464.0
67.5°	239.3	300.9	373.4	422.9	439.8
70°	207.8	270.7	345.6	397.5	412.0
72.5°	178.8	244.1	320.2	371.0	389.1
75°	148.6	216.3	293.6	345.6	361.3
77.5°	119.6	189.7	268.3	320.2	337.1
80°	90.6	164.3	242.9	293.6	310.5
82.5°	66.5	139.0	218.7	269.5	285.2
85°	43.5	118.4	195.8	246.5	263.4
87.5°	26.6	99.1	176.4	226.0	241.7
90°	12.1	82.2	159.5	207.8	222.3
92.5°	10.9	74.9	148.6	195.8	210.3
95°	9.7	66.5	139.0	184.9	199.4
97.5°	8.5	60.4	130.5	175.2	189.7
100°	8.5	53.2	120.8	165.5	178.8
102.5°	7.3	47.1	112.4	155.9	169.2
105°	6.0	41.1	103.9	146.2	159.5
107.5°	6.0	35.0	95.5	136.5	149.8
110°	4.8	29.0	88.2	126.9	140.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.8	24.2	79.8	118.4	131.7
115°	4.8	18.1	72.5	108.8	122.0
117.5°	3.6	13.3	64.0	100.3	112.4
120°	3.6	8.5	56.8	90.6	103.9
122.5°	3.6	4.8	49.5	82.2	93.0
125°	2.4	2.4	41.1	73.7	84.6
127.5°	2.4	1.2	33.8	64.0	74.9
130°	2.4	1.2	26.6	55.6	65.3
132.5°	2.4	1.2	19.3	47.1	56.8
135°	1.2	1.2	13.3	38.7	48.3
137.5°	1.2	1.2	7.3	30.2	38.7
140°	1.2	0.0	2.4	21.8	29.0
142.5°	1.2	0.0	0.0	14.5	20.5
145°	0.0	0.0	0.0	7.3	13.3
147.5°	0.0	0.0	0.0	1.2	4.8
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)