

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: P242341

Luminaire Tested: **S122DR-S865D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242341  
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-S865D930-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: 2737.3 lumens  
Efficiency: N/A  
Efficacy: 78.7 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

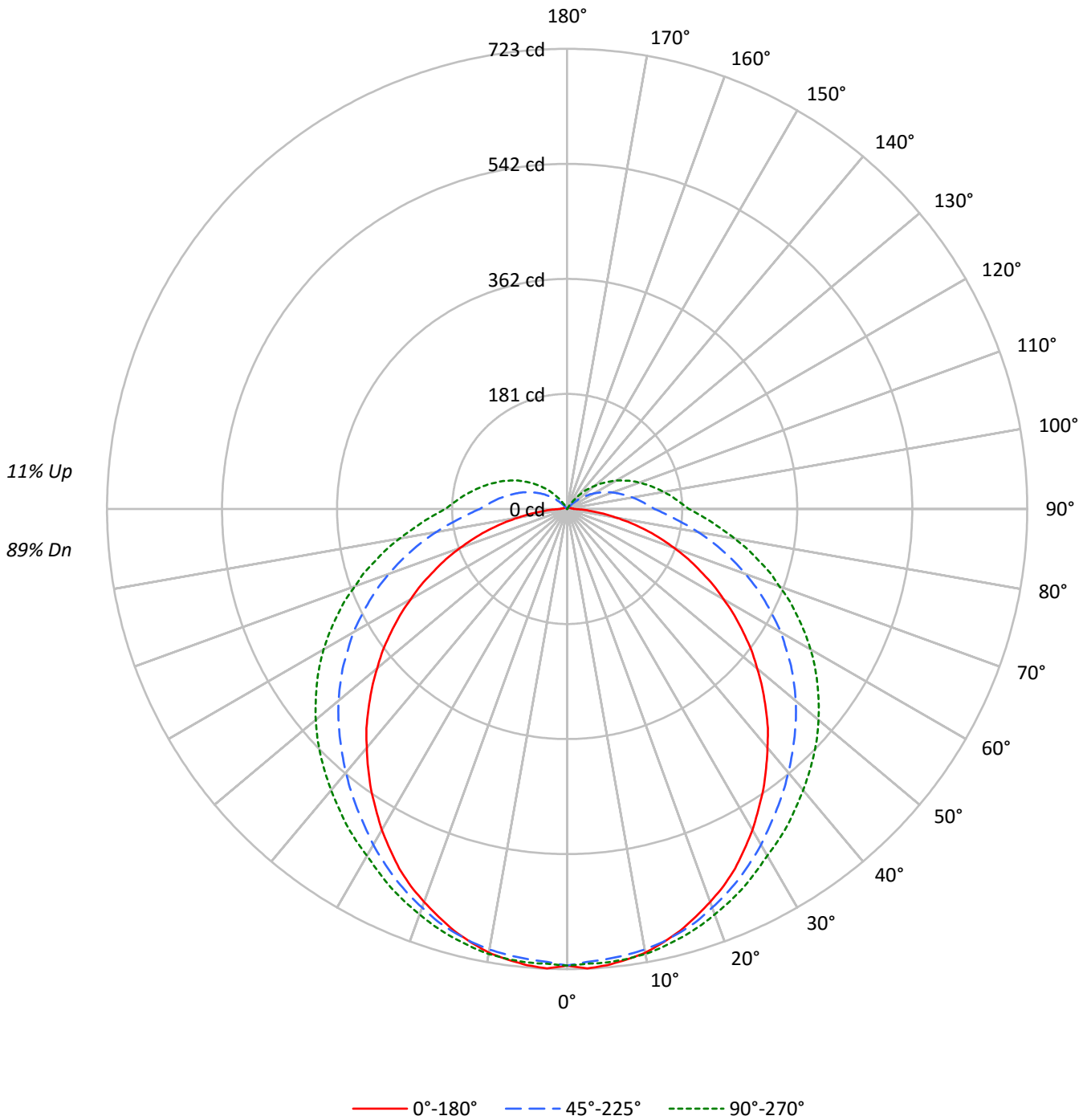
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	13665	13665	13665
5°	13731	13097	13026
10°	13642	12658	12477
15°	13454	12202	11913
20°	13216	11721	11375
25°	12980	11260	10888
30°	12648	10790	10403
35°	12313	10336	10050
40°	11961	9944	9697
45°	11624	9591	9392
50°	11265	9265	9091
55°	10887	8919	8783
60°	10423	8559	8461
65°	9944	8143	8085
70°	9402	7697	7682
75°	8713	7249	7304
80°	7626	6787	6912
85°	6561	6354	6579



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.0	2.5
10°-20°	195.1	7.1
20°-30°	295.5	10.8
30°-40°	359.9	13.1
40°-50°	387.2	14.1
50°-60°	376.0	13.7
60°-70°	328.4	12.0
70°-80°	252.7	9.2
80°-90°	169.3	6.2
90°-100°	116.8	4.3
100°-110°	85.3	3.1
110°-120°	56.3	2.1
120°-130°	31.4	1.1
130°-140°	13.2	0.5
140°-150°	2.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	558.6	20.4
0°-40°	918.5	33.6
0°-60°	1681.7	61.4
0°-90°	2432.2	88.9
90°-120°	258.4	9.4
90°-150°	305.2	11.1
90°-180°	305.0	11.1
0°-180°	2737.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	717	717	717	717	717	
5°	720	716	710	716	715	68
15°	686	688	688	698	697	193
25°	624	631	640	653	656	287
35°	538	555	575	598	605	336
45°	441	469	505	538	548	340
55°	338	375	429	467	480	302
65°	231	282	343	386	399	229
75°	128	186	253	297	311	135
85°	37	102	168	212	227	39
90°	10	71	137	179	191	7
95°	8	57	120	159	172	7
105°	5	35	89	126	137	6
115°	4	16	62	94	105	4
125°	2	2	35	63	73	2
135°	1	1	11	33	42	1
145°	0	0	0	6	11	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°	717.4	717.4	717.4	717.4	717.4
2.5°	722.6	719.5	712.2	717.4	715.3
5°	719.5	716.4	710.1	716.4	715.3
7.5°	714.3	712.2	707.0	714.3	713.2
10°	708.0	706.0	702.8	711.2	710.1
12.5°	697.6	698.7	696.6	704.9	703.9
15°	686.2	688.3	688.3	697.6	696.6
17.5°	671.7	675.8	678.9	688.3	688.3
20°	657.1	662.3	666.5	677.9	677.9
22.5°	641.5	647.7	654.0	665.4	667.5
25°	623.8	631.1	640.5	652.9	656.1
27.5°	603.0	614.5	624.9	640.5	642.5
30°	582.2	595.8	609.3	625.9	629.0
32.5°	559.4	575.0	591.6	611.3	617.6
35°	537.5	555.2	575.0	597.8	605.1
37.5°	513.6	533.4	558.3	583.3	590.6
40°	489.7	512.6	540.6	567.7	577.0
42.5°	466.8	489.7	523.0	553.1	562.5
45°	440.8	468.9	505.3	537.5	547.9
47.5°	415.9	446.0	487.6	520.9	532.3
50°	389.9	422.1	468.9	504.3	515.7
52.5°	364.9	399.2	449.2	485.5	498.0
55°	337.9	375.3	429.4	466.8	480.3
57.5°	311.9	353.5	407.6	448.1	461.6
60°	283.8	328.5	387.8	427.3	441.9
62.5°	258.9	305.7	364.9	407.6	421.1
65°	230.8	281.8	343.1	385.7	399.2
67.5°	205.9	258.9	321.3	363.9	378.5
70°	178.8	232.9	297.4	342.1	354.5
72.5°	153.9	210.0	275.5	319.2	334.8
75°	127.9	186.1	252.6	297.4	310.9
77.5°	102.9	163.2	230.8	275.5	290.1
80°	78.0	141.4	209.0	252.6	267.2
82.5°	57.2	119.6	188.2	231.9	245.4
85°	37.4	101.9	168.4	212.1	226.7
87.5°	22.9	85.3	151.8	194.4	207.9
90°	10.4	70.7	137.2	178.8	191.3
92.5°	9.4	64.5	127.9	168.4	180.9
95°	8.3	57.2	119.6	159.1	171.6
97.5°	7.3	52.0	112.3	150.8	163.2
100°	7.3	45.7	104.0	142.4	153.9
102.5°	6.2	40.5	96.7	134.1	145.6
105°	5.2	35.4	89.4	125.8	137.2
107.5°	5.2	30.2	82.1	117.5	128.9
110°	4.2	25.0	75.9	109.2	120.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	20.8	68.6	101.9	113.3
115°	4.2	15.6	62.4	93.6	105.0
117.5°	3.1	11.4	55.1	86.3	96.7
120°	3.1	7.3	48.9	78.0	89.4
122.5°	3.1	4.2	42.6	70.7	80.1
125°	2.1	2.1	35.4	63.4	72.8
127.5°	2.1	1.0	29.1	55.1	64.5
130°	2.1	1.0	22.9	47.8	56.1
132.5°	2.1	1.0	16.6	40.5	48.9
135°	1.0	1.0	11.4	33.3	41.6
137.5°	1.0	1.0	6.2	26.0	33.3
140°	1.0	0.0	2.1	18.7	25.0
142.5°	1.0	0.0	0.0	12.5	17.7
145°	0.0	0.0	0.0	6.2	11.4
147.5°	0.0	0.0	0.0	1.0	4.2
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)