

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242256

Luminaire Tested: S122DRP-S485D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242256  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S485D830-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

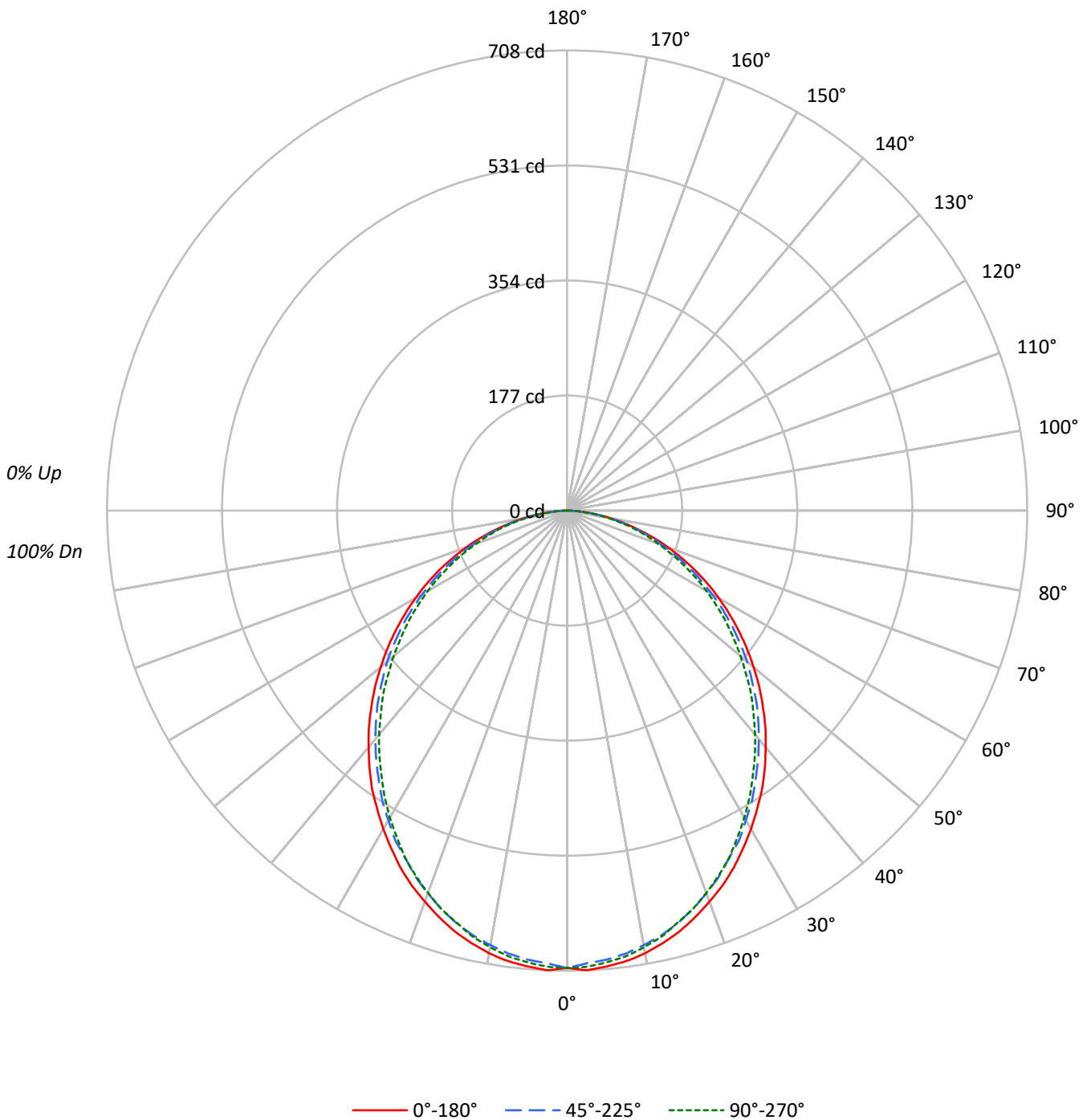
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1790.7 lumens  
Efficiency: N/A  
Efficacy: 95.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
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: 24 FT

TEST NUMBER: P242256

CATALOG NUMBER: S122DRP-S485D830-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71																												
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60																												
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51																												
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39																												
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35																												
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26																												

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

	0°	45°	90°
0°	13406	13406	13406
5°	13457	13264	13342
10°	13379	13129	13195
15°	13212	12958	12946
20°	12977	12703	12689
25°	12745	12389	12389
30°	12444	12101	11998
35°	12164	11754	11582
40°	11813	11411	11192
45°	11467	11066	10791
50°	11092	10709	10327
55°	10697	10295	9913
60°	10263	9798	9436
65°	9789	9303	8874
70°	9195	8705	8293
75°	8368	8022	7823
80°	7426	7196	6834
85°	6054	5770	5180

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11467 cd/sqm

TEST NUMBER: P242256

CATALOG NUMBER: S122DRP-S485D830-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.2	3.7
10°-20°	186.4	10.4
20°-30°	273.9	15.3
30°-40°	318.1	17.8
40°-50°	317.7	17.7
50°-60°	277.0	15.5
60°-70°	204.8	11.4
70°-80°	115.9	6.5
80°-90°	30.6	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	526.5	29.4
0°-40°	844.7	47.2
0°-60°	1439.4	80.4
0°-90°	1790.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1790.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	704	701	694	699	698	67
15°	670	666	657	660	656	189
25°	606	601	590	591	590	279
35°	523	516	506	502	498	327
45°	426	421	411	403	401	329
55°	322	318	310	302	298	288
65°	217	213	206	200	197	215
75°	114	112	109	105	106	121
85°	28	27	26	24	24	33
90°	0	0	0	0	0	

TEST NUMBER: P242256

CATALOG NUMBER: S122DRP-S485D830-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	703.8	703.8	703.8	703.8	703.8
2.5°	707.9	704.5	697.1	703.8	702.5
5°	703.8	701.1	693.7	699.1	697.8
7.5°	699.1	695.0	687.6	693.0	691.7
10°	691.7	686.9	678.8	684.2	682.2
12.5°	681.5	677.4	669.3	672.7	671.4
15°	670.0	665.9	657.1	659.9	656.5
17.5°	655.8	651.7	642.9	646.3	642.9
20°	640.2	636.2	626.7	628.7	626.0
22.5°	624.7	618.6	609.8	609.8	608.4
25°	606.4	601.0	589.5	590.8	589.5
27.5°	586.1	581.3	572.5	570.5	567.1
30°	565.8	560.4	550.2	548.2	545.5
32.5°	544.1	540.1	529.2	525.2	522.5
35°	523.1	516.4	505.5	501.5	498.1
37.5°	499.5	493.4	482.5	477.8	474.4
40°	475.1	469.7	458.9	452.8	450.1
42.5°	451.4	446.0	435.2	428.4	424.3
45°	425.7	421.0	410.8	403.4	400.6
47.5°	400.6	395.9	385.1	377.6	373.6
50°	374.3	370.9	361.4	351.9	348.5
52.5°	348.5	343.8	335.0	327.6	322.8
55°	322.1	318.1	310.0	301.8	298.5
57.5°	295.7	292.4	283.6	275.4	272.7
60°	269.4	266.6	257.2	249.7	247.7
62.5°	243.6	238.9	232.1	225.4	222.7
65°	217.2	213.2	206.4	200.3	196.9
67.5°	190.2	186.8	180.7	176.0	173.3
70°	165.1	162.4	156.3	151.6	148.9
72.5°	139.4	136.7	133.3	128.6	126.6
75°	113.7	112.3	109.0	104.9	106.3
77.5°	90.7	88.0	86.6	84.6	82.6
80°	67.7	67.0	65.6	63.6	62.3
82.5°	46.0	46.0	45.3	42.6	42.6
85°	27.7	27.1	26.4	24.4	23.7
87.5°	12.2	10.8	9.5	7.4	6.8
90°	0.0	0.0	0.0	0.0	0.0

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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	20.30	21.91	20.67	22.23	22.54	19.86	21.47	20.22	21.78	22.09
	3H	22.05	23.51	22.43	23.83	24.19	21.56	23.01	21.94	23.34	23.70
	4H	22.70	24.07	23.10	24.41	24.79	22.20	23.57	22.60	23.92	24.30
	6H	23.17	24.44	23.58	24.80	25.19	22.67	23.93	23.08	24.30	24.69
	8H	23.31	24.52	23.73	24.91	25.31	22.81	24.02	23.23	24.41	24.81
	12H	23.40	24.56	23.83	24.94	25.37	22.89	24.05	23.32	24.43	24.86
4H	2H	20.86	22.23	21.26	22.58	22.95	20.51	21.88	20.91	22.22	22.60
	3H	22.84	23.98	23.25	24.38	24.78	22.43	23.58	22.84	23.97	24.37
	4H	23.61	24.65	24.04	25.06	25.50	23.19	24.23	23.62	24.64	25.07
	6H	24.21	25.11	24.66	25.55	26.01	23.78	24.68	24.23	25.12	25.58
	8H	24.40	25.25	24.86	25.69	26.15	23.96	24.81	24.42	25.25	25.72
	12H	24.53	25.29	25.01	25.77	26.24	24.08	24.84	24.56	25.31	25.78
8H	4H	23.89	24.73	24.35	25.17	25.64	23.51	24.36	23.97	24.80	25.27
	6H	24.60	25.30	25.09	25.79	26.27	24.22	24.92	24.71	25.41	25.89
	8H	24.86	25.49	25.37	26.00	26.48	24.47	25.10	24.98	25.61	26.09
	12H	25.06	25.62	25.57	26.11	26.67	24.65	25.20	25.15	25.69	26.26
12H	4H	23.91	24.67	24.39	25.15	25.62	23.55	24.31	24.03	24.78	25.25
	6H	24.65	25.28	25.16	25.78	26.27	24.28	24.91	24.79	25.42	25.90
	8H	24.96	25.52	25.47	26.01	26.57	24.58	25.14	25.09	25.63	26.19