

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: P242275

Luminaire Tested: S122DRP-S485D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242275  
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-S485D935-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

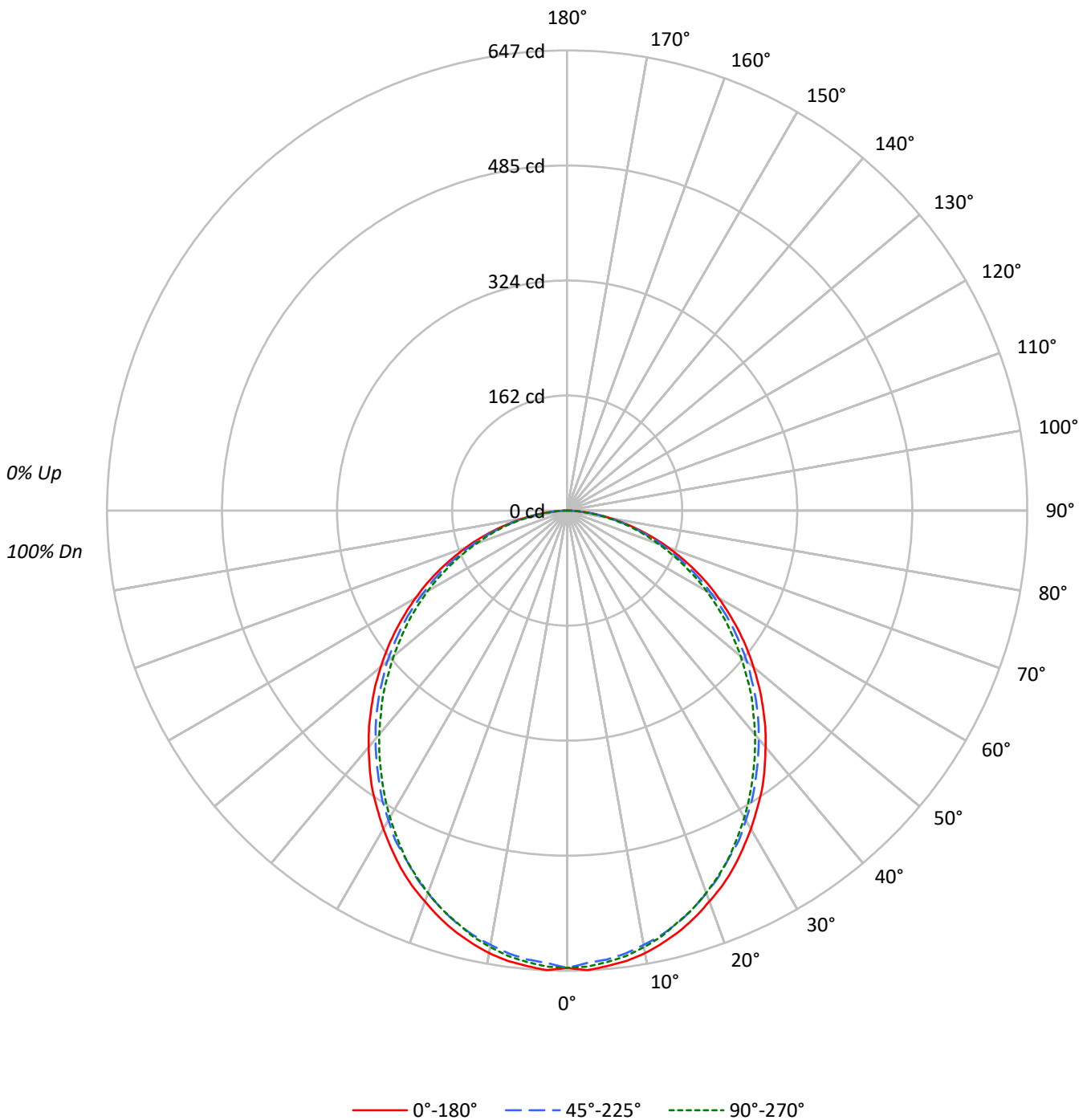
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1635.8 lumens  
Efficiency: N/A  
Efficacy: 87.0 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 (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: 24 FT

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### 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°	12248	12248	12248
5°	12294	12117	12187
10°	12220	11994	12054
15°	12068	11838	11826
20°	11854	11605	11592
25°	11641	11318	11318
30°	11367	11054	10960
35°	11113	10738	10580
40°	10791	10423	10222
45°	10476	10110	9859
50°	10132	9782	9435
55°	9773	9401	9053
60°	9375	8949	8621
65°	8942	8500	8108
70°	8398	7953	7574
75°	7646	7323	7146
80°	6779	6581	6241
85°	5529	5267	4721

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10476 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.5	3.7
10°-20°	170.3	10.4
20°-30°	250.2	15.3
30°-40°	290.6	17.8
40°-50°	290.3	17.7
50°-60°	253.1	15.5
60°-70°	187.1	11.4
70°-80°	105.9	6.5
80°-90°	27.9	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°	481.0	29.4
0°-40°	771.6	47.2
0°-60°	1314.9	80.4
0°-90°	1635.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1635.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	643	643	643	643	643	
5°	643	640	634	639	637	61
15°	612	608	600	603	600	172
25°	554	549	538	540	538	255
35°	478	472	462	458	455	298
45°	389	384	375	368	366	300
55°	294	291	283	276	273	263
65°	198	195	189	183	180	196
75°	104	103	100	96	97	111
85°	25	25	24	22	22	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	643.0	643.0	643.0	643.0	643.0
2.5°	646.7	643.6	636.8	643.0	641.7
5°	643.0	640.5	633.7	638.6	637.4
7.5°	638.6	634.9	628.1	633.1	631.8
10°	631.8	627.5	620.1	625.0	623.2
12.5°	622.5	618.8	611.4	614.5	613.3
15°	612.0	608.3	600.3	602.8	599.7
17.5°	599.1	595.3	587.3	590.4	587.3
20°	584.8	581.1	572.5	574.3	571.9
22.5°	570.6	565.1	557.0	557.0	555.8
25°	553.9	549.0	538.5	539.7	538.5
27.5°	535.4	531.1	523.0	521.2	518.1
30°	516.8	511.9	502.6	500.8	498.3
32.5°	497.0	493.3	483.4	479.7	477.3
35°	477.9	471.7	461.8	458.1	455.0
37.5°	456.2	450.7	440.8	436.5	433.4
40°	434.0	429.0	419.2	413.6	411.1
42.5°	412.4	407.4	397.5	391.3	387.6
45°	388.9	384.5	375.3	368.5	366.0
47.5°	366.0	361.7	351.8	345.0	341.3
50°	341.9	338.8	330.1	321.5	318.4
52.5°	318.4	314.1	306.0	299.2	294.9
55°	294.3	290.6	283.1	275.7	272.6
57.5°	270.2	267.1	259.0	251.6	249.1
60°	246.1	243.6	234.9	228.1	226.3
62.5°	222.6	218.2	212.0	205.9	203.4
65°	198.4	194.7	188.6	183.0	179.9
67.5°	173.7	170.6	165.1	160.7	158.3
70°	150.8	148.4	142.8	138.5	136.0
72.5°	127.4	124.9	121.8	117.5	115.6
75°	103.9	102.6	99.5	95.8	97.1
77.5°	82.8	80.4	79.1	77.3	75.4
80°	61.8	61.2	60.0	58.1	56.9
82.5°	42.0	42.0	41.4	38.9	38.9
85°	25.3	24.7	24.1	22.3	21.6
87.5°	11.1	9.9	8.7	6.8	6.2
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	19.99	21.60	20.35	21.91	22.23	19.54	21.15	19.91	21.47	21.78
	3H	21.74	23.19	22.11	23.52	23.88	21.25	22.70	21.62	23.03	23.39
	4H	22.38	23.75	22.78	24.10	24.48	21.89	23.26	22.29	23.60	23.98
	6H	22.85	24.12	23.26	24.49	24.88	22.35	23.62	22.76	23.98	24.37
	8H	22.99	24.21	23.42	24.59	24.99	22.49	23.70	22.92	24.09	24.49
	12H	23.08	24.24	23.51	24.63	25.06	22.57	23.73	23.00	24.11	24.54
4H	2H	20.55	21.92	20.95	22.26	22.64	20.19	21.56	20.59	21.91	22.29
	3H	22.52	23.67	22.93	24.07	24.47	22.12	23.26	22.53	23.66	24.06
	4H	23.30	24.33	23.73	24.75	25.18	22.87	23.91	23.31	24.32	24.76
	6H	23.90	24.80	24.35	25.24	25.70	23.46	24.37	23.92	24.81	25.26
	8H	24.08	24.93	24.54	25.37	25.84	23.65	24.49	24.11	24.94	25.40
	12H	24.22	24.98	24.70	25.45	25.92	23.76	24.52	24.24	25.00	25.47
8H	4H	23.57	24.42	24.03	24.86	25.33	23.20	24.04	23.66	24.49	24.95
	6H	24.29	24.99	24.78	25.48	25.95	23.90	24.61	24.40	25.10	25.57
	8H	24.55	25.18	25.05	25.68	26.17	24.15	24.78	24.66	25.29	25.78
	12H	24.74	25.30	25.25	25.79	26.35	24.33	24.89	24.84	25.38	25.94
12H	4H	23.60	24.36	24.08	24.83	25.30	23.23	23.99	23.71	24.47	24.94
	6H	24.33	24.96	24.84	25.47	25.96	23.96	24.60	24.47	25.10	25.59
	8H	24.64	25.20	25.15	25.69	26.25	24.27	24.82	24.77	25.32	25.88