

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: P242841

Luminaire Tested: S125DRP-S610D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242841  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-S610D830-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

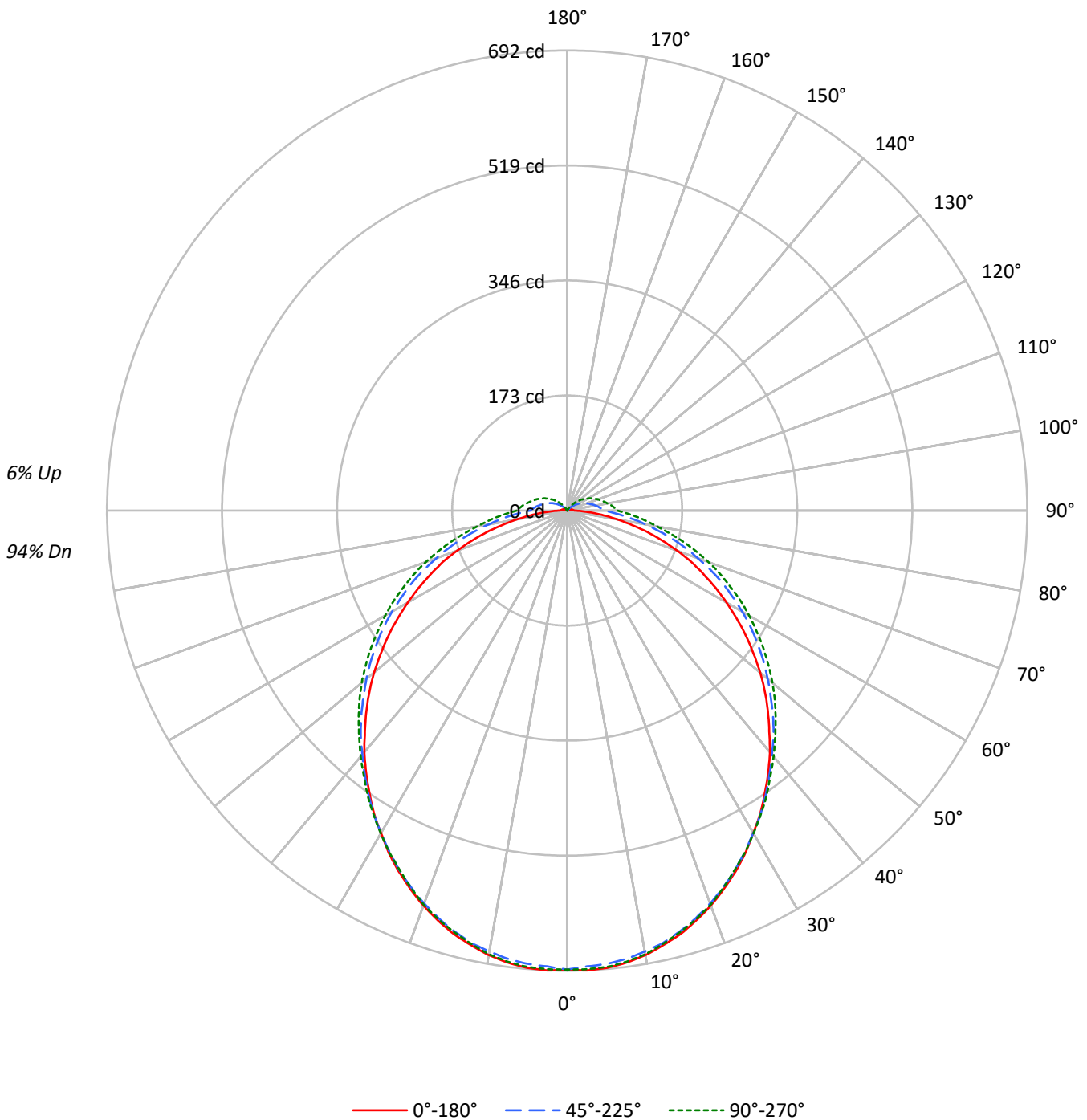
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2138.5 lumens  
Efficiency: N/A  
Efficacy: 113.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')  
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

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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	50	30	10	0	
RCR																						
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94				
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76				
2	96	88	80	74	93	85	78	73	81	75	70	76	72	68	72	69	65	63				
3	88	77	68	61	84	75	67	60	71	64	59	67	61	57	64	59	55	53				
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45				
5	74	60	51	44	71	59	50	44	56	49	43	53	47	42	51	45	41	39				
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34				
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30				
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27				
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24				
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22				

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

	0°	45°	90°
0°	4906	4906	4906
5°	4916	4812	4826
10°	4880	4722	4712
15°	4823	4615	4570
20°	4744	4484	4427
25°	4650	4345	4253
30°	4537	4192	4095
35°	4431	4051	3949
40°	4323	3903	3803
45°	4202	3775	3673
50°	4086	3636	3557
55°	3946	3505	3420
60°	3793	3355	3281
65°	3633	3197	3124
70°	3453	2984	2962
75°	3165	2778	2763
80°	2791	2526	2546
85°	2435	2342	2456

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4202 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.3	3.1
10°-20°	185.4	8.7
20°-30°	275.8	12.9
30°-40°	326.6	15.3
40°-50°	337.6	15.8
50°-60°	311.0	14.5
60°-70°	251.4	11.8
70°-80°	168.2	7.9
80°-90°	87.0	4.1
90°-100°	49.0	2.3
100°-110°	36.1	1.7
110°-120°	24.2	1.1
120°-130°	13.7	0.6
130°-140°	6.0	0.3
140°-150°	1.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	526.5	24.6
0°-40°	853.1	39.9
0°-60°	1501.7	70.2
0°-90°	2008.3	93.9
90°-120°	109.3	5.1
90°-150°	130.1	6.1
90°-180°	130.0	6.1
0°-180°	2138.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	690	690	690	690	690	
5°	690	689	684	690	689	66
15°	659	660	655	659	656	186
25°	599	601	597	600	596	276
35°	518	523	521	523	523	324
45°	427	434	438	443	443	330
55°	328	339	350	357	360	293
65°	226	242	258	268	271	224
75°	124	142	164	177	181	132
85°	37	60	83	98	104	39
90°	11	32	56	71	76	8
95°	9	26	49	64	69	7
105°	6	17	37	51	56	6
115°	4	9	26	39	43	4
125°	3	2	16	26	30	2
135°	1	1	5	14	18	1
145°	1	0	0	3	6	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°	690.3	690.3	690.3	690.3	690.3
2.5°	692.3	691.0	686.2	691.0	690.3
5°	690.3	689.0	684.2	689.6	689.0
7.5°	685.6	684.9	680.2	684.9	684.2
10°	678.8	678.8	673.4	678.1	677.4
12.5°	669.3	670.0	665.9	669.3	667.3
15°	659.2	659.9	655.1	659.2	656.5
17.5°	646.3	647.7	642.9	646.3	644.3
20°	632.1	633.5	628.7	630.7	630.7
22.5°	615.9	618.6	613.2	615.9	613.8
25°	598.9	601.0	596.9	599.6	596.2
27.5°	580.7	583.4	578.6	580.7	579.3
30°	559.7	563.7	559.7	561.0	560.4
32.5°	540.7	544.1	541.4	542.8	542.1
35°	518.4	523.1	521.1	523.1	523.1
37.5°	496.7	500.8	500.1	502.8	502.2
40°	474.4	479.8	479.2	481.9	483.2
42.5°	450.1	457.5	459.5	462.9	462.9
45°	427.0	434.5	437.9	442.6	443.3
47.5°	403.4	410.1	415.5	422.3	423.7
50°	379.0	386.4	393.9	401.3	403.4
52.5°	353.3	362.7	372.2	380.3	381.7
55°	328.2	339.1	349.9	357.3	360.0
57.5°	302.5	315.4	327.6	335.7	337.7
60°	276.8	290.3	303.9	314.0	316.1
62.5°	251.8	265.3	280.2	291.7	294.4
65°	226.0	241.6	257.8	268.0	270.7
67.5°	202.4	217.2	233.5	245.7	249.1
70°	176.0	191.5	209.1	222.0	226.0
72.5°	150.2	166.5	186.1	200.3	203.0
75°	124.5	142.1	163.8	177.3	180.7
77.5°	99.5	119.8	140.1	155.0	157.7
80°	76.5	96.8	119.8	134.7	137.4
82.5°	55.5	77.2	100.8	115.1	120.5
85°	37.2	59.6	83.2	98.1	103.5
87.5°	23.7	45.3	68.4	83.9	88.7
90°	10.8	32.5	55.5	71.1	75.8
92.5°	9.5	29.1	52.8	67.7	72.4
95°	8.8	26.4	49.4	64.3	69.0
97.5°	8.1	24.4	46.7	60.9	65.6
100°	7.4	21.7	43.3	57.5	61.6
102.5°	6.8	19.6	40.6	54.1	58.2
105°	6.1	16.9	37.2	50.8	55.5
107.5°	5.4	14.9	34.5	48.1	52.1
110°	4.7	12.9	31.8	44.7	49.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.7	10.8	29.1	41.3	46.0
115°	4.1	8.8	26.4	38.6	42.6
117.5°	3.4	6.8	23.7	35.2	39.9
120°	3.4	5.4	21.0	32.5	36.5
122.5°	2.7	3.4	18.3	29.1	33.2
125°	2.7	2.0	15.6	26.4	29.8
127.5°	2.0	1.4	12.9	23.0	27.1
130°	2.0	1.4	10.8	20.3	23.7
132.5°	1.4	1.4	8.1	17.6	20.3
135°	1.4	0.7	5.4	14.2	17.6
137.5°	1.4	0.7	3.4	11.5	14.2
140°	0.7	0.7	1.4	8.8	11.5
142.5°	0.7	0.0	0.0	6.1	8.8
145°	0.7	0.0	0.0	3.4	6.1
147.5°	0.0	0.0	0.0	1.4	2.7
150°	0.0	0.0	0.0	0.0	0.7
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



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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	15.44	16.98	15.90	17.42	17.88	16.49	18.02	16.94	18.46	18.92
	3H	17.10	18.49	17.57	18.94	19.44	18.67	20.06	19.14	20.51	21.01
	4H	17.66	18.98	18.16	19.45	19.97	19.63	20.94	20.12	21.41	21.93
	6H	18.04	19.27	18.55	19.75	20.29	20.52	21.75	21.03	22.23	22.77
	8H	18.15	19.32	18.66	19.83	20.37	20.96	22.13	21.48	22.64	23.18
	12H	18.21	19.33	18.73	19.83	20.40	21.42	22.54	21.94	23.04	23.61
4H	2H	16.21	17.52	16.70	17.99	18.51	17.02	18.34	17.51	18.81	19.32
	3H	18.08	19.20	18.59	19.71	20.26	19.41	20.53	19.92	21.04	21.58
	4H	18.79	19.81	19.31	20.33	20.90	20.53	21.54	21.05	22.07	22.64
	6H	19.30	20.19	19.84	20.74	21.33	21.59	22.49	22.14	23.04	23.63
	8H	19.45	20.29	20.00	20.84	21.44	22.11	22.95	22.66	23.50	24.10
	12H	19.55	20.31	20.12	20.89	21.49	22.67	23.43	23.24	24.01	24.61
8H	4H	19.27	20.11	19.82	20.66	21.26	20.79	21.63	21.34	22.18	22.78
	6H	19.93	20.64	20.52	21.24	21.84	22.01	22.72	22.59	23.31	23.92
	8H	20.17	20.81	20.77	21.42	22.04	22.65	23.28	23.24	23.89	24.51
	12H	20.36	20.92	20.95	21.51	22.20	23.36	23.93	23.96	24.52	25.21
12H	4H	19.37	20.13	19.94	20.71	21.32	20.80	21.57	21.38	22.14	22.75
	6H	20.10	20.74	20.69	21.34	21.96	22.06	22.70	22.65	23.30	23.92
	8H	20.42	20.98	21.01	21.57	22.26	22.76	23.33	23.36	23.92	24.61