

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: P243710

Luminaire Tested: S125DRP-H610D840-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243710  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-56)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-H610D840-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

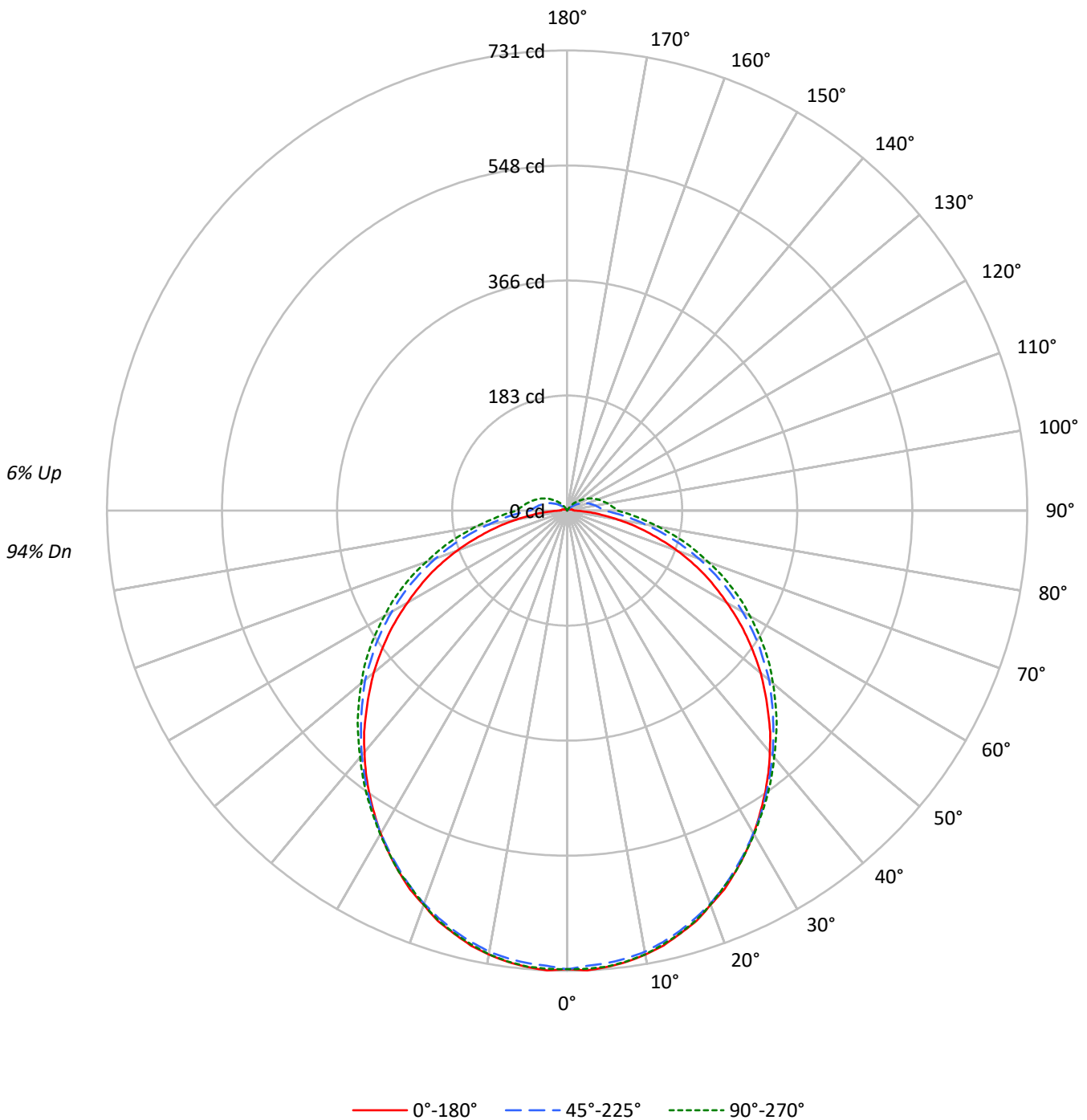
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2261.9 lumens  
Efficiency: N/A  
Efficacy: 131.5 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): 17.2  
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	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°	5178	5178	5178
5°	5183	5075	5092
10°	5150	4990	4978
15°	5088	4871	4836
20°	5002	4740	4674
25°	4914	4587	4514
30°	4803	4432	4339
35°	4684	4281	4183
40°	4565	4134	4027
45°	4439	3987	3899
50°	4326	3866	3763
55°	4185	3716	3639
60°	4014	3553	3481
65°	3874	3382	3326
70°	3646	3171	3123
75°	3338	2923	2945
80°	2973	2654	2720
85°	2645	2483	2589

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4439 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.9	3.0
10°-20°	195.8	8.7
20°-30°	291.5	12.9
30°-40°	345.4	15.3
40°-50°	357.3	15.8
50°-60°	329.6	14.6
60°-70°	266.4	11.8
70°-80°	178.0	7.9
80°-90°	91.8	4.1
90°-100°	51.5	2.3
100°-110°	38.2	1.7
110°-120°	25.4	1.1
120°-130°	14.2	0.6
130°-140°	6.4	0.3
140°-150°	1.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	556.3	24.6
0°-40°	901.7	39.9
0°-60°	1588.6	70.2
0°-90°	2124.8	93.9
90°-120°	115.1	5.1
90°-150°	137.1	6.1
90°-180°	137.0	6.1
0°-180°	2261.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	728	728	728	728	728	
5°	728	727	722	727	727	69
15°	696	698	691	696	695	196
25°	633	636	630	634	633	291
35°	548	552	551	553	554	343
45°	451	458	462	470	471	349
55°	348	359	371	380	383	311
65°	241	255	273	285	288	238
75°	131	151	172	187	193	139
85°	40	63	88	104	109	42
90°	11	34	59	75	80	8
95°	9	28	52	67	72	7
105°	7	18	40	54	59	7
115°	5	9	28	40	45	4
125°	3	3	16	26	31	3
135°	1	1	6	16	18	1
145°	1	0	0	4	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°	728.5	728.5	728.5	728.5	728.5
2.5°	731.2	729.1	723.8	729.1	728.5
5°	727.8	727.1	721.7	727.1	727.1
7.5°	723.1	722.4	717.7	723.1	722.4
10°	716.3	716.3	711.6	715.7	715.7
12.5°	707.6	707.6	702.2	706.9	705.6
15°	695.5	697.5	691.4	695.5	694.8
17.5°	683.4	683.4	678.6	682.0	682.0
20°	666.5	669.2	664.5	667.9	665.9
22.5°	651.7	653.1	648.3	651.7	648.3
25°	632.9	635.6	630.2	633.5	632.9
27.5°	613.3	615.4	611.3	615.4	613.3
30°	592.5	594.5	591.8	594.5	593.8
32.5°	570.2	574.3	572.3	574.3	573.6
35°	548.0	552.1	550.7	553.4	554.1
37.5°	525.1	529.2	529.2	532.5	533.2
40°	500.9	506.3	507.6	512.3	511.7
42.5°	477.3	482.7	484.7	490.8	490.8
45°	451.1	458.5	462.5	469.9	470.6
47.5°	426.2	434.3	440.3	447.0	448.4
50°	401.3	408.7	418.8	425.5	426.8
52.5°	374.3	383.8	393.9	403.3	406.0
55°	348.1	358.8	371.0	379.7	383.1
57.5°	321.1	332.6	346.1	356.8	359.5
60°	292.9	306.3	321.8	332.6	335.3
62.5°	266.6	281.4	297.6	309.0	313.1
65°	241.0	255.2	272.7	284.8	288.2
67.5°	213.4	228.9	247.1	260.6	263.9
70°	185.8	202.7	222.2	235.0	238.3
72.5°	157.5	176.4	197.3	211.4	215.4
75°	131.3	150.8	172.4	187.2	192.6
77.5°	106.4	126.6	148.1	163.6	168.3
80°	81.5	102.3	125.9	142.1	146.8
82.5°	59.2	81.5	105.7	121.9	126.6
85°	40.4	63.3	88.2	103.7	109.1
87.5°	24.9	47.1	72.7	88.2	93.6
90°	11.4	33.7	58.6	74.7	80.1
92.5°	10.1	31.0	55.2	71.4	76.1
95°	9.4	28.3	51.8	67.3	72.0
97.5°	8.8	25.6	48.5	64.0	68.7
100°	8.1	22.9	45.8	60.6	65.3
102.5°	7.4	20.9	42.4	57.2	61.3
105°	6.7	18.2	39.7	53.9	58.6
107.5°	6.1	15.5	37.0	50.5	55.2
110°	5.4	13.5	33.7	47.1	51.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.7	11.4	31.0	43.8	48.5
115°	4.7	9.4	27.6	40.4	45.1
117.5°	4.0	7.4	24.2	37.0	41.7
120°	3.4	5.4	21.5	33.7	38.4
122.5°	3.4	4.0	18.9	30.3	35.0
125°	2.7	2.7	16.2	26.3	31.0
127.5°	2.7	2.0	13.5	23.6	26.9
130°	2.0	1.3	11.4	20.9	24.2
132.5°	2.0	1.3	8.8	18.2	21.5
135°	1.3	1.3	6.1	15.5	18.2
137.5°	1.3	0.7	4.0	12.1	15.5
140°	0.7	0.7	1.3	9.4	12.1
142.5°	0.7	0.7	0.7	6.7	9.4
145°	0.7	0.0	0.0	4.0	6.1
147.5°	0.7	0.0	0.0	1.3	3.4
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	15.63	17.16	16.08	17.60	18.06	16.72	18.25	17.17	18.69	19.15
	3H	17.28	18.67	17.75	19.12	19.62	18.88	20.27	19.35	20.72	21.23
	4H	17.85	19.16	18.34	19.63	20.15	19.84	21.16	20.33	21.63	22.15
	6H	18.23	19.46	18.74	19.94	20.47	20.75	21.97	21.25	22.45	22.99
	8H	18.34	19.51	18.85	20.02	20.56	21.18	22.35	21.69	22.85	23.39
	12H	18.40	19.53	18.92	20.02	20.60	21.63	22.75	22.15	23.25	23.82
4H	2H	16.39	17.71	16.88	18.18	18.70	17.24	18.56	17.73	19.03	19.55
	3H	18.27	19.39	18.78	19.90	20.44	19.63	20.74	20.13	21.25	21.80
	4H	18.98	20.00	19.50	20.52	21.09	20.74	21.76	21.26	22.28	22.85
	6H	19.49	20.39	20.03	20.94	21.53	21.81	22.70	22.35	23.25	23.84
	8H	19.64	20.49	20.19	21.03	21.64	22.32	23.16	22.87	23.71	24.31
	12H	19.75	20.51	20.32	21.09	21.69	22.87	23.63	23.44	24.21	24.82
8H	4H	19.46	20.30	20.01	20.85	21.45	20.99	21.84	21.54	22.38	22.99
	6H	20.13	20.84	20.71	21.43	22.04	22.22	22.93	22.80	23.52	24.13
	8H	20.37	21.01	20.96	21.61	22.23	22.85	23.49	23.45	24.09	24.71
	12H	20.55	21.12	21.15	21.71	22.40	23.56	24.13	24.16	24.72	25.41
12H	4H	19.56	20.32	20.13	20.90	21.50	21.01	21.77	21.58	22.35	22.96
	6H	20.29	20.93	20.88	21.53	22.15	22.26	22.90	22.86	23.51	24.13
	8H	20.61	21.18	21.20	21.77	22.45	22.97	23.54	23.56	24.13	24.81