

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: P243725

Luminaire Tested: S125DRP-H610D940-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243725  
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-H610D940-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

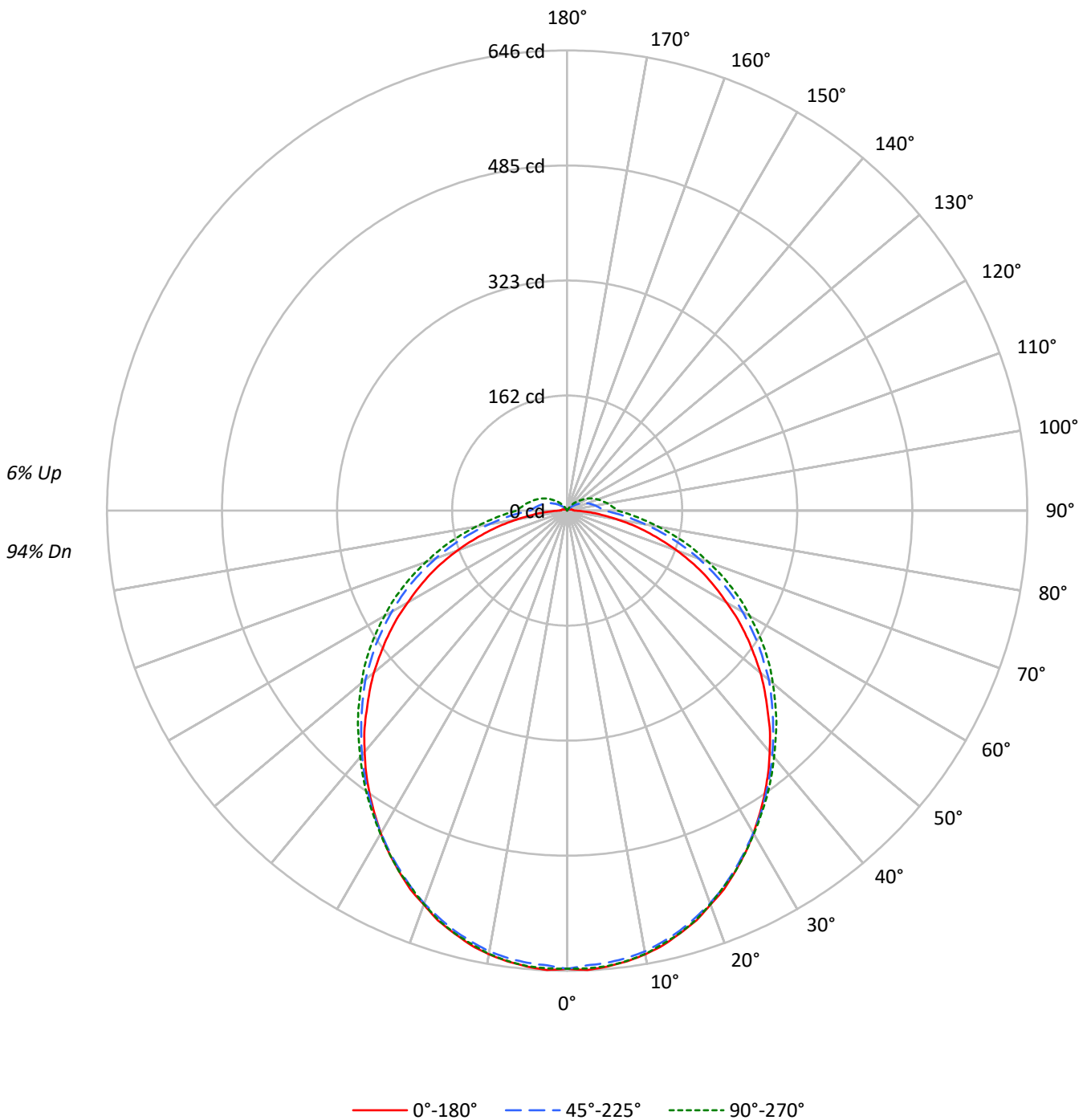
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1997.3 lumens  
Efficiency: N/A  
Efficacy: 116.1 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 (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				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°	4571	4571	4571
5°	4576	4482	4496
10°	4548	4406	4395
15°	4493	4301	4270
20°	4417	4185	4126
25°	4339	4050	3986
30°	4240	3914	3831
35°	4136	3780	3694
40°	4031	3650	3556
45°	3919	3521	3442
50°	3820	3414	3323
55°	3694	3282	3213
60°	3544	3138	3074
65°	3421	2987	2936
70°	3220	2800	2757
75°	2946	2581	2600
80°	2623	2345	2401
85°	2337	2193	2285

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3919 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.9	3.0
10°-20°	172.9	8.7
20°-30°	257.4	12.9
30°-40°	305.0	15.3
40°-50°	315.5	15.8
50°-60°	291.0	14.6
60°-70°	235.2	11.8
70°-80°	157.2	7.9
80°-90°	81.1	4.1
90°-100°	45.5	2.3
100°-110°	33.7	1.7
110°-120°	22.5	1.1
120°-130°	12.6	0.6
130°-140°	5.6	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°	491.2	24.6
0°-40°	796.2	39.9
0°-60°	1402.8	70.2
0°-90°	1876.2	93.9
90°-120°	101.7	5.1
90°-150°	121.1	6.1
90°-180°	121.0	6.1
0°-180°	1997.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	643	643	643	643	643	
5°	643	642	637	642	642	61
15°	614	616	610	614	614	173
25°	559	561	556	559	559	257
35°	484	488	486	489	489	303
45°	398	405	408	415	416	308
55°	307	317	328	335	338	275
65°	213	225	241	252	254	210
75°	116	133	152	165	170	123
85°	36	56	78	92	96	37
90°	10	30	52	66	71	7
95°	8	25	46	59	64	7
105°	6	16	35	48	52	6
115°	4	8	24	36	40	4
125°	2	2	14	23	27	2
135°	1	1	5	14	16	1
145°	1	0	0	4	5	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°	643.2	643.2	643.2	643.2	643.2
2.5°	645.6	643.8	639.1	643.8	643.2
5°	642.6	642.0	637.3	642.0	642.0
7.5°	638.5	637.9	633.7	638.5	637.9
10°	632.5	632.5	628.4	631.9	631.9
12.5°	624.8	624.8	620.1	624.2	623.0
15°	614.1	615.9	610.5	614.1	613.5
17.5°	603.4	603.4	599.2	602.2	602.2
20°	588.5	590.9	586.8	589.7	587.9
22.5°	575.5	576.7	572.5	575.5	572.5
25°	558.8	561.2	556.4	559.4	558.8
27.5°	541.6	543.4	539.8	543.4	541.6
30°	523.1	524.9	522.6	524.9	524.3
32.5°	503.5	507.1	505.3	507.1	506.5
35°	483.9	487.5	486.3	488.7	489.3
37.5°	463.7	467.3	467.3	470.2	470.8
40°	442.3	447.1	448.2	452.4	451.8
42.5°	421.5	426.2	428.0	433.4	433.4
45°	398.3	404.8	408.4	415.0	415.5
47.5°	376.3	383.4	388.8	394.7	395.9
50°	354.3	360.9	369.8	375.7	376.9
52.5°	330.5	338.9	347.8	356.1	358.5
55°	307.3	316.9	327.6	335.3	338.3
57.5°	283.6	293.7	305.6	315.1	317.5
60°	258.6	270.5	284.2	293.7	296.1
62.5°	235.4	248.5	262.8	272.9	276.4
65°	212.8	225.3	240.8	251.5	254.4
67.5°	188.5	202.1	218.2	230.1	233.0
70°	164.1	178.9	196.2	207.5	210.4
72.5°	139.1	155.8	174.2	186.7	190.2
75°	115.9	133.2	152.2	165.3	170.0
77.5°	93.9	111.8	130.8	144.5	148.6
80°	71.9	90.4	111.2	125.4	129.6
82.5°	52.3	71.9	93.3	107.6	111.8
85°	35.7	55.9	77.9	91.6	96.3
87.5°	22.0	41.6	64.2	77.9	82.6
90°	10.1	29.7	51.7	66.0	70.7
92.5°	8.9	27.3	48.7	63.0	67.2
95°	8.3	25.0	45.8	59.4	63.6
97.5°	7.7	22.6	42.8	56.5	60.6
100°	7.1	20.2	40.4	53.5	57.7
102.5°	6.5	18.4	37.5	50.5	54.1
105°	5.9	16.1	35.1	47.6	51.7
107.5°	5.4	13.7	32.7	44.6	48.7
110°	4.8	11.9	29.7	41.6	45.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	10.1	27.3	38.6	42.8
115°	4.2	8.3	24.4	35.7	39.8
117.5°	3.6	6.5	21.4	32.7	36.9
120°	3.0	4.8	19.0	29.7	33.9
122.5°	3.0	3.6	16.6	26.8	30.9
125°	2.4	2.4	14.3	23.2	27.3
127.5°	2.4	1.8	11.9	20.8	23.8
130°	1.8	1.2	10.1	18.4	21.4
132.5°	1.8	1.2	7.7	16.1	19.0
135°	1.2	1.2	5.4	13.7	16.1
137.5°	1.2	0.6	3.6	10.7	13.7
140°	0.6	0.6	1.2	8.3	10.7
142.5°	0.6	0.6	0.6	5.9	8.3
145°	0.6	0.0	0.0	3.6	5.4
147.5°	0.6	0.0	0.0	1.2	3.0
150°	0.0	0.0	0.0	0.0	0.6
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	15.20	16.73	15.65	17.17	17.63	16.28	17.82	16.74	18.26	18.72
	3H	16.84	18.24	17.31	18.69	19.19	18.45	19.84	18.92	20.29	20.80
	4H	17.41	18.73	17.90	19.20	19.72	19.41	20.73	19.90	21.20	21.72
	6H	17.80	19.03	18.30	19.51	20.04	20.31	21.54	20.82	22.02	22.56
	8H	17.91	19.08	18.42	19.58	20.12	20.74	21.92	21.26	22.42	22.96
	12H	17.97	19.09	18.49	19.59	20.16	21.20	22.32	21.72	22.82	23.39
4H	2H	15.96	17.28	16.45	17.75	18.26	16.81	18.13	17.30	18.60	19.12
	3H	17.84	18.96	18.34	19.47	20.01	19.19	20.31	19.70	20.82	21.36
	4H	18.55	19.56	19.07	20.09	20.66	20.30	21.32	20.83	21.85	22.42
	6H	19.06	19.96	19.60	20.50	21.09	21.37	22.27	21.92	22.82	23.41
	8H	19.21	20.05	19.76	20.60	21.20	21.89	22.73	22.44	23.28	23.88
	12H	19.31	20.08	19.89	20.65	21.26	22.44	23.20	23.01	23.78	24.39
8H	4H	19.03	19.87	19.58	20.42	21.02	20.56	21.40	21.11	21.95	22.55
	6H	19.70	20.40	20.28	21.00	21.60	21.78	22.49	22.37	23.08	23.69
	8H	19.94	20.57	20.53	21.18	21.80	22.42	23.06	23.01	23.66	24.28
	12H	20.12	20.69	20.72	21.28	21.97	23.13	23.69	23.72	24.29	24.97
12H	4H	19.13	19.89	19.70	20.47	21.07	20.58	21.34	21.15	21.92	22.53
	6H	19.86	20.50	20.45	21.10	21.72	21.83	22.47	22.43	23.08	23.70
	8H	20.17	20.74	20.77	21.33	22.02	22.53	23.10	23.13	23.69	24.38