

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: P243698

Luminaire Tested: S125DRP-H1090D927-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243698  
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-H1090D927-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

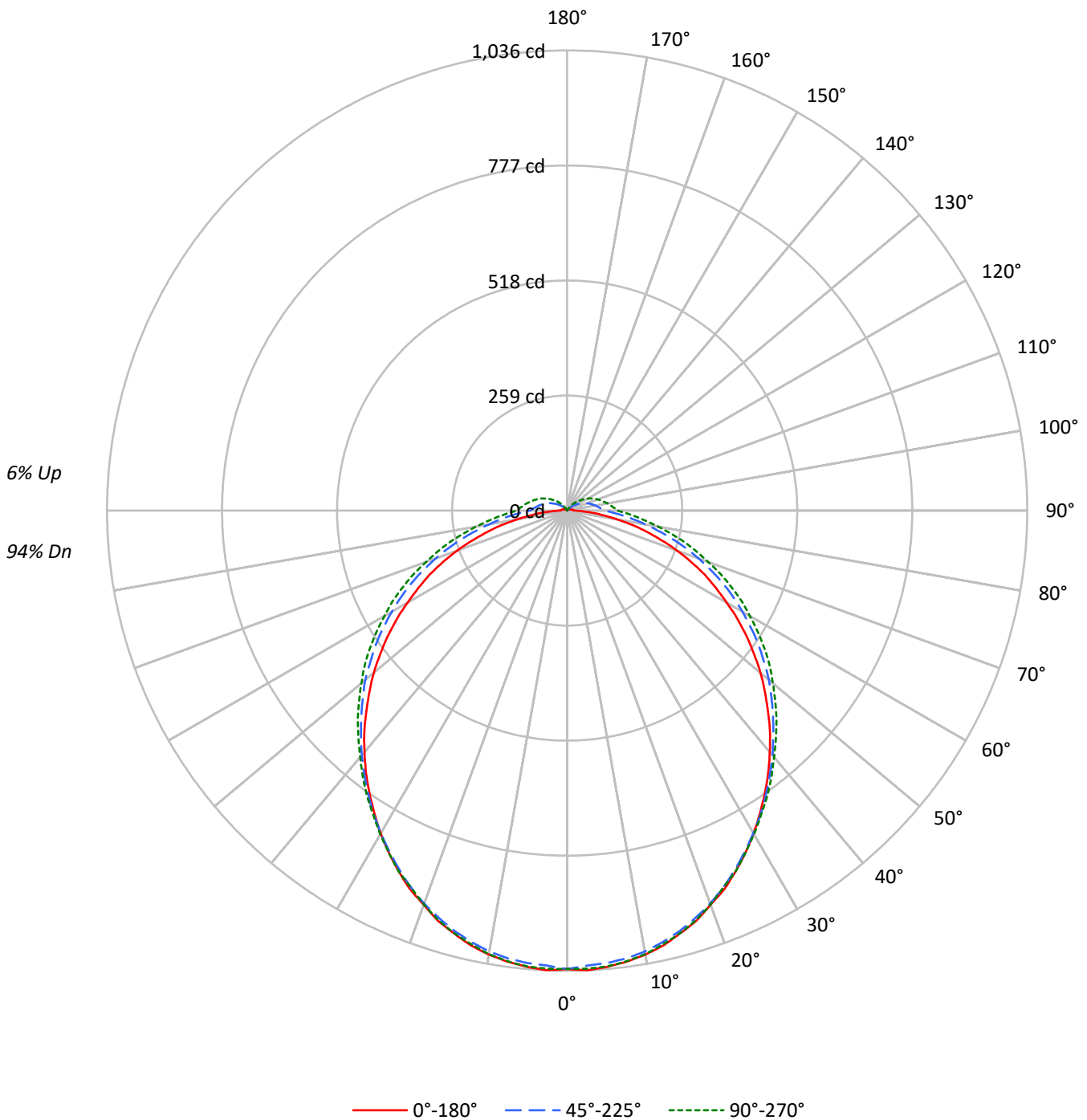
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3204.6 lumens  
Efficiency: N/A  
Efficacy: 101.7 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): 31.5  
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			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°	7335	7335	7335
5°	7343	7191	7215
10°	7297	7069	7053
15°	7208	6901	6852
20°	7087	6715	6622
25°	6961	6498	6395
30°	6804	6279	6148
35°	6636	6065	5926
40°	6468	5857	5705
45°	6289	5649	5524
50°	6129	5477	5332
55°	5928	5265	5156
60°	5686	5034	4931
65°	5490	4791	4712
70°	5166	4493	4425
75°	4728	4141	4172
80°	4210	3761	3852
85°	3744	3519	3666

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6289 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.7	3.0
10°-20°	277.5	8.7
20°-30°	413.0	12.9
30°-40°	489.3	15.3
40°-50°	506.3	15.8
50°-60°	467.0	14.6
60°-70°	377.4	11.8
70°-80°	252.2	7.9
80°-90°	130.1	4.1
90°-100°	73.0	2.3
100°-110°	54.1	1.7
110°-120°	36.0	1.1
120°-130°	20.2	0.6
130°-140°	9.0	0.3
140°-150°	1.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	788.2	24.6
0°-40°	1277.5	39.9
0°-60°	2250.7	70.2
0°-90°	3010.4	93.9
90°-120°	163.1	5.1
90°-150°	194.3	6.1
90°-180°	194.0	6.1
0°-180°	3204.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1032	1032	1032	1032	1032	
5°	1031	1030	1022	1030	1030	98
15°	985	988	980	985	984	278
25°	897	900	893	898	897	413
35°	776	782	780	784	785	486
45°	639	650	655	666	667	494
55°	493	508	526	538	543	441
65°	342	362	386	404	408	337
75°	186	214	244	265	273	198
85°	57	90	125	147	154	59
90°	16	48	83	106	114	11
95°	13	40	73	95	102	11
105°	10	26	56	76	83	10
115°	7	13	39	57	64	6
125°	4	4	23	37	44	4
135°	2	2	9	22	26	2
145°	1	0	0	6	9	1
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°	1032.1	1032.1	1032.1	1032.1	1032.1
2.5°	1035.9	1033.0	1025.4	1033.0	1032.1
5°	1031.1	1030.2	1022.5	1030.2	1030.2
7.5°	1024.5	1023.5	1016.8	1024.5	1023.5
10°	1014.9	1014.9	1008.2	1014.0	1014.0
12.5°	1002.5	1002.5	994.9	1001.6	999.7
15°	985.3	988.2	979.6	985.3	984.4
17.5°	968.2	968.2	961.5	966.3	966.3
20°	944.3	948.1	941.5	946.2	943.4
22.5°	923.3	925.3	918.6	923.3	918.6
25°	896.6	900.5	892.8	897.6	896.6
27.5°	869.0	871.8	866.1	871.8	869.0
30°	839.4	842.3	838.4	842.3	841.3
32.5°	807.9	813.6	810.8	813.6	812.7
35°	776.4	782.2	780.3	784.1	785.0
37.5°	744.0	749.7	749.7	754.5	755.5
40°	709.7	717.3	719.2	725.9	724.9
42.5°	676.3	683.9	686.8	695.4	695.4
45°	639.1	649.6	655.3	665.8	666.8
47.5°	603.8	615.2	623.8	633.4	635.3
50°	568.5	579.0	593.3	602.8	604.8
52.5°	530.3	543.7	558.0	571.4	575.2
55°	493.1	508.4	525.6	538.0	542.8
57.5°	455.0	471.2	490.3	505.5	509.4
60°	414.9	434.0	455.9	471.2	475.0
62.5°	377.7	398.7	421.6	437.8	443.5
65°	341.5	361.5	386.3	403.5	408.3
67.5°	302.4	324.3	350.1	369.1	373.9
70°	263.3	287.1	314.8	332.9	337.7
72.5°	223.2	249.9	279.5	299.5	305.2
75°	186.0	213.7	244.2	265.2	272.8
77.5°	150.7	179.3	209.9	231.8	238.5
80°	115.4	145.0	178.4	201.3	207.9
82.5°	83.9	115.4	149.8	172.6	179.3
85°	57.2	89.7	125.0	146.9	154.5
87.5°	35.3	66.8	103.0	125.0	132.6
90°	16.2	47.7	83.0	105.9	113.5
92.5°	14.3	43.9	78.2	101.1	107.8
95°	13.4	40.1	73.4	95.4	102.1
97.5°	12.4	36.2	68.7	90.6	97.3
100°	11.4	32.4	64.9	85.8	92.5
102.5°	10.5	29.6	60.1	81.1	86.8
105°	9.5	25.8	56.3	76.3	83.0
107.5°	8.6	21.9	52.5	71.5	78.2
110°	7.6	19.1	47.7	66.8	73.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.7	16.2	43.9	62.0	68.7
115°	6.7	13.4	39.1	57.2	63.9
117.5°	5.7	10.5	34.3	52.5	59.1
120°	4.8	7.6	30.5	47.7	54.4
122.5°	4.8	5.7	26.7	42.9	49.6
125°	3.8	3.8	22.9	37.2	43.9
127.5°	3.8	2.9	19.1	33.4	38.2
130°	2.9	1.9	16.2	29.6	34.3
132.5°	2.9	1.9	12.4	25.8	30.5
135°	1.9	1.9	8.6	21.9	25.8
137.5°	1.9	1.0	5.7	17.2	21.9
140°	1.0	1.0	1.9	13.4	17.2
142.5°	1.0	1.0	1.0	9.5	13.4
145°	1.0	0.0	0.0	5.7	8.6
147.5°	1.0	0.0	0.0	1.9	4.8
150°	0.0	0.0	0.0	0.0	1.0
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	16.84	18.37	17.29	18.81	19.27	17.93	19.46	18.38	19.90	20.36
	3H	18.49	19.88	18.96	20.33	20.83	20.09	21.48	20.56	21.93	22.44
	4H	19.06	20.38	19.55	20.84	21.36	21.05	22.37	21.54	22.84	23.36
	6H	19.44	20.67	19.95	21.15	21.68	21.96	23.18	22.46	23.66	24.20
	8H	19.55	20.72	20.06	21.23	21.77	22.39	23.56	22.90	24.06	24.60
	12H	19.61	20.74	20.13	21.23	21.81	22.84	23.96	23.36	24.46	25.03
4H	2H	17.60	18.92	18.09	19.39	19.91	18.45	19.77	18.95	20.24	20.76
	3H	19.48	20.60	19.99	21.11	21.65	20.84	21.95	21.34	22.46	23.01
	4H	20.19	21.21	20.71	21.73	22.30	21.95	22.97	22.47	23.49	24.06
	6H	20.70	21.60	21.24	22.15	22.74	23.02	23.91	23.56	24.46	25.05
	8H	20.85	21.70	21.40	22.24	22.85	23.53	24.37	24.08	24.92	25.52
	12H	20.96	21.72	21.53	22.30	22.90	24.08	24.84	24.65	25.42	26.03
8H	4H	20.67	21.51	21.22	22.06	22.66	22.20	23.05	22.75	23.59	24.20
	6H	21.34	22.05	21.92	22.64	23.25	23.43	24.14	24.01	24.73	25.34
	8H	21.58	22.22	22.17	22.82	23.44	24.06	24.70	24.66	25.30	25.92
	12H	21.76	22.33	22.36	22.92	23.61	24.77	25.34	25.36	25.93	26.62
12H	4H	20.77	21.53	21.34	22.11	22.72	22.22	22.98	22.79	23.56	24.17
	6H	21.50	22.14	22.09	22.74	23.36	23.47	24.11	24.07	24.72	25.34
	8H	21.82	22.39	22.41	22.98	23.66	24.18	24.75	24.77	25.34	26.02