

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: P243722

Luminaire Tested: S125DRP-H1090D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243722  
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-H1090D935-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

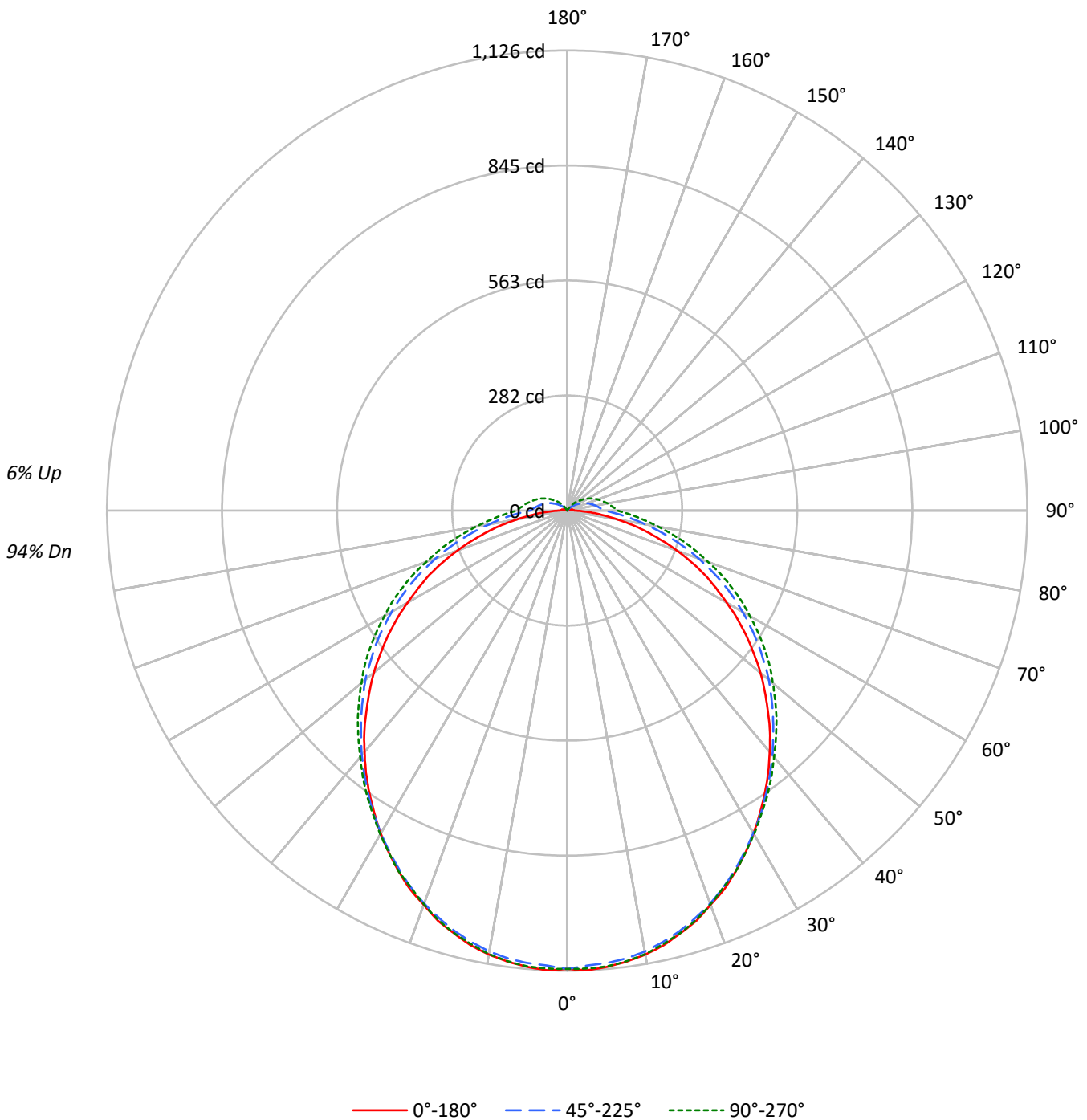
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3482.9 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 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 (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	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°	7972	7972	7972
5°	7981	7816	7842
10°	7931	7684	7665
15°	7835	7501	7447
20°	7703	7299	7196
25°	7566	7063	6951
30°	7395	6825	6682
35°	7213	6592	6441
40°	7029	6366	6201
45°	6835	6140	6004
50°	6661	5952	5795
55°	6444	5722	5603
60°	6181	5472	5360
65°	5966	5208	5121
70°	5614	4883	4809
75°	5140	4500	4534
80°	4575	4088	4187
85°	4071	3823	3986

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6835 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.2	3.0
10°-20°	301.6	8.7
20°-30°	448.9	12.9
30°-40°	531.8	15.3
40°-50°	550.3	15.8
50°-60°	507.5	14.6
60°-70°	410.1	11.8
70°-80°	274.1	7.9
80°-90°	141.4	4.1
90°-100°	79.3	2.3
100°-110°	58.8	1.7
110°-120°	39.2	1.1
120°-130°	21.9	0.6
130°-140°	9.8	0.3
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	856.6	24.6
0°-40°	1388.5	39.9
0°-60°	2446.3	70.2
0°-90°	3271.9	93.9
90°-120°	177.3	5.1
90°-150°	211.1	6.1
90°-180°	211.0	6.1
0°-180°	3482.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1121	1120	1111	1120	1120	106
15°	1071	1074	1065	1071	1070	302
25°	974	979	970	976	974	449
35°	844	850	848	852	853	528
45°	695	706	712	724	725	537
55°	536	553	571	585	590	479
65°	371	393	420	438	444	366
75°	202	232	265	288	296	215
85°	62	98	136	160	168	64
90°	18	52	90	115	123	12
95°	14	44	80	104	111	11
105°	10	28	61	83	90	11
115°	7	14	42	62	70	7
125°	4	4	25	40	48	4
135°	2	2	9	24	28	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°	1121.7	1121.7	1121.7	1121.7	1121.7
2.5°	1125.9	1122.8	1114.5	1122.8	1121.7
5°	1120.7	1119.7	1111.4	1119.7	1119.7
7.5°	1113.4	1112.4	1105.2	1113.4	1112.4
10°	1103.1	1103.1	1095.8	1102.0	1102.0
12.5°	1089.6	1089.6	1081.3	1088.6	1086.5
15°	1070.9	1074.1	1064.7	1070.9	1069.9
17.5°	1052.3	1052.3	1045.0	1050.2	1050.2
20°	1026.4	1030.5	1023.3	1028.4	1025.3
22.5°	1003.6	1005.6	998.4	1003.6	998.4
25°	974.5	978.7	970.4	975.6	974.5
27.5°	944.5	947.6	941.4	947.6	944.5
30°	912.3	915.4	911.3	915.4	914.4
32.5°	878.1	884.3	881.2	884.3	883.3
35°	843.9	850.1	848.0	852.2	853.2
37.5°	808.6	814.9	814.9	820.1	821.1
40°	771.3	779.6	781.7	789.0	787.9
42.5°	735.0	743.3	746.4	755.8	755.8
45°	694.6	706.0	712.2	723.6	724.7
47.5°	656.3	668.7	678.0	688.4	690.5
50°	617.9	629.3	644.8	655.2	657.3
52.5°	576.4	590.9	606.5	621.0	625.1
55°	536.0	552.6	571.2	584.7	589.9
57.5°	494.5	512.1	532.9	549.5	553.6
60°	451.0	471.7	495.6	512.1	516.3
62.5°	410.5	433.4	458.2	475.9	482.1
65°	371.1	392.9	419.9	438.5	443.7
67.5°	328.6	352.5	380.5	401.2	406.4
70°	286.1	312.1	342.1	361.8	367.0
72.5°	242.6	271.6	303.8	325.5	331.8
75°	202.2	232.2	265.4	288.2	296.5
77.5°	163.8	194.9	228.1	251.9	259.2
80°	125.4	157.6	193.9	218.8	226.0
82.5°	91.2	125.4	162.8	187.6	194.9
85°	62.2	97.5	135.8	159.7	168.0
87.5°	38.4	72.6	112.0	135.8	144.1
90°	17.6	51.8	90.2	115.1	123.4
92.5°	15.6	47.7	85.0	109.9	117.2
95°	14.5	43.5	79.8	103.7	110.9
97.5°	13.5	39.4	74.6	98.5	105.7
100°	12.4	35.2	70.5	93.3	100.6
102.5°	11.4	32.1	65.3	88.1	94.3
105°	10.4	28.0	61.2	82.9	90.2
107.5°	9.3	23.8	57.0	77.8	85.0
110°	8.3	20.7	51.8	72.6	79.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7.3	17.6	47.7	67.4	74.6
115°	7.3	14.5	42.5	62.2	69.5
117.5°	6.2	11.4	37.3	57.0	64.3
120°	5.2	8.3	33.2	51.8	59.1
122.5°	5.2	6.2	29.0	46.7	53.9
125°	4.1	4.1	24.9	40.4	47.7
127.5°	4.1	3.1	20.7	36.3	41.5
130°	3.1	2.1	17.6	32.1	37.3
132.5°	3.1	2.1	13.5	28.0	33.2
135°	2.1	2.1	9.3	23.8	28.0
137.5°	2.1	1.0	6.2	18.7	23.8
140°	1.0	1.0	2.1	14.5	18.7
142.5°	1.0	1.0	1.0	10.4	14.5
145°	1.0	0.0	0.0	6.2	9.3
147.5°	1.0	0.0	0.0	2.1	5.2
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	17.13	18.66	17.58	19.10	19.56	18.22	19.75	18.67	20.19	20.65
	3H	18.78	20.17	19.25	20.62	21.12	20.38	21.77	20.85	22.22	22.73
	4H	19.35	20.66	19.84	21.13	21.65	21.34	22.66	21.83	23.13	23.65
	6H	19.73	20.96	20.24	21.44	21.97	22.25	23.47	22.75	23.95	24.49
	8H	19.84	21.01	20.35	21.52	22.06	22.68	23.85	23.19	24.35	24.89
	12H	19.90	21.03	20.42	21.52	22.10	23.13	24.25	23.65	24.75	25.32
4H	2H	17.89	19.21	18.38	19.68	20.20	18.74	20.06	19.24	20.53	21.05
	3H	19.77	20.89	20.28	21.40	21.94	21.13	22.24	21.63	22.75	23.30
	4H	20.48	21.50	21.00	22.02	22.59	22.24	23.26	22.76	23.78	24.35
	6H	20.99	21.89	21.53	22.44	23.02	23.31	24.20	23.85	24.75	25.34
	8H	21.14	21.99	21.69	22.53	23.14	23.82	24.66	24.37	25.21	25.81
	12H	21.25	22.01	21.82	22.59	23.19	24.37	25.13	24.94	25.71	26.32
8H	4H	20.96	21.80	21.51	22.35	22.95	22.49	23.34	23.04	23.88	24.49
	6H	21.63	22.34	22.21	22.93	23.54	23.72	24.43	24.30	25.02	25.63
	8H	21.87	22.51	22.46	23.11	23.73	24.35	24.99	24.95	25.59	26.21
	12H	22.05	22.62	22.65	23.21	23.90	25.06	25.63	25.65	26.22	26.91
12H	4H	21.06	21.82	21.63	22.40	23.00	22.51	23.27	23.08	23.85	24.46
	6H	21.79	22.43	22.38	23.03	23.65	23.76	24.40	24.36	25.01	25.63
	8H	22.11	22.68	22.70	23.27	23.95	24.47	25.04	25.06	25.63	26.31