

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: P243633

Luminaire Tested: S125DRP-H850D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243633  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-51)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-H850D830-X4F0-XX-UDD-F-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

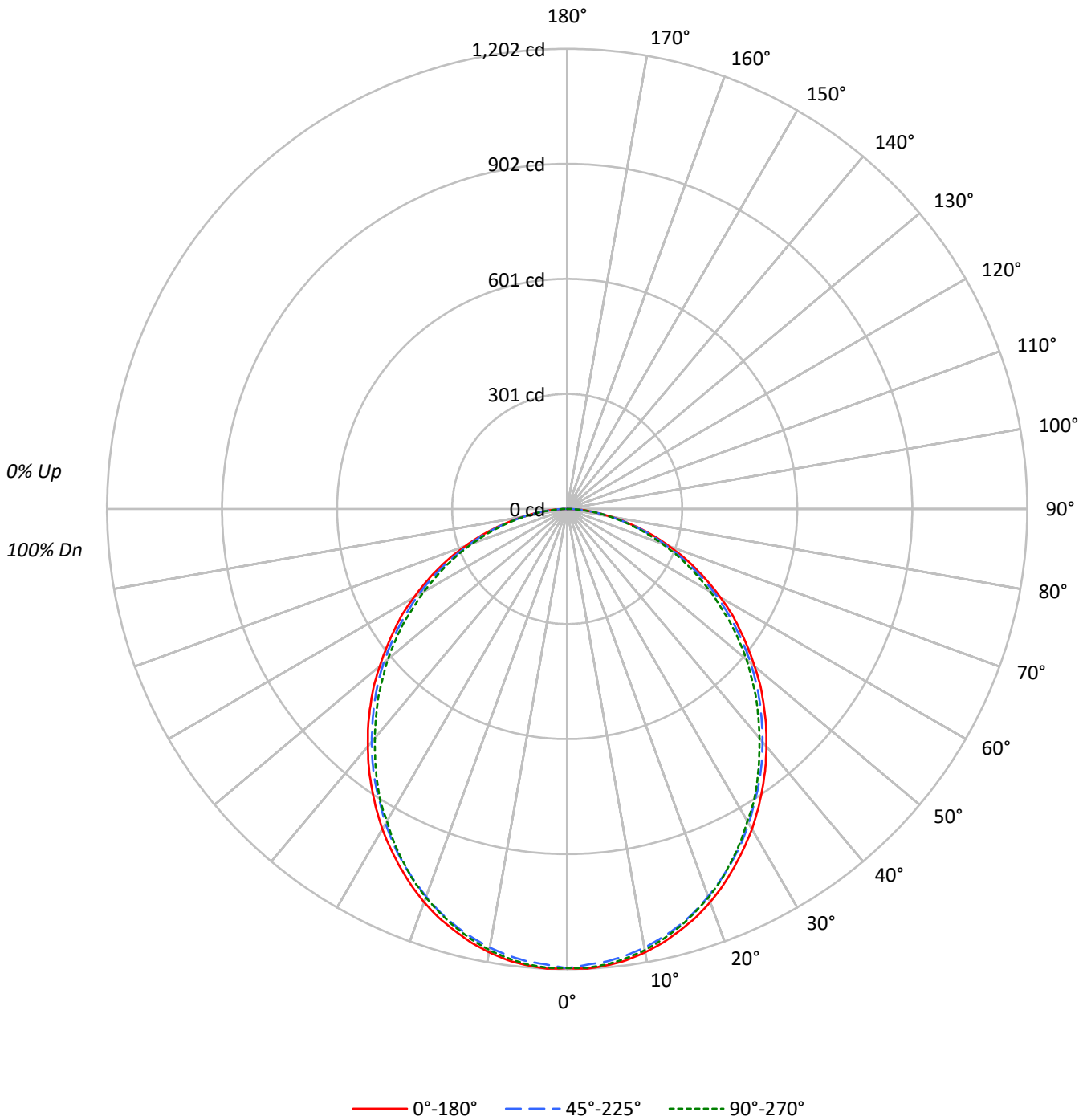
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3096.2 lumens  
Efficiency: N/A  
Efficacy: 131.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.6  
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	50	30	10	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39																												
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25																												

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

	0°	45°	90°
0°	8525	8525	8525
5°	8539	8464	8520
10°	8485	8396	8447
15°	8385	8295	8320
20°	8267	8147	8167
25°	8095	7978	7964
30°	7923	7786	7728
35°	7719	7582	7514
40°	7511	7365	7251
45°	7306	7147	7015
50°	7064	6918	6763
55°	6826	6640	6467
60°	6567	6380	6155
65°	6261	6039	5831
70°	5870	5650	5467
75°	5412	5245	5003
80°	4719	4682	4576
85°	4094	4094	3874

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7306 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.2	3.7
10°-20°	319.3	10.3
20°-30°	470.8	15.2
30°-40°	548.2	17.7
40°-50°	549.3	17.7
50°-60°	480.2	15.5
60°-70°	356.4	11.5
70°-80°	202.1	6.5
80°-90°	56.7	1.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	903.2	29.2
0°-40°	1451.5	46.9
0°-60°	2481.0	80.1
0°-90°	3096.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3096.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1200	1200	1200	1200	1200	
5°	1197	1195	1186	1195	1194	114
15°	1140	1138	1127	1134	1131	321
25°	1032	1029	1017	1020	1016	476
35°	890	884	874	869	866	557
45°	727	725	711	700	698	561
55°	551	550	536	524	522	493
65°	372	370	359	351	347	369
75°	197	194	191	187	182	209
85°	50	50	50	48	48	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1199.5	1199.5	1199.5	1199.5	1199.5
2.5°	1202.1	1200.4	1191.6	1200.4	1199.5
5°	1196.8	1195.1	1186.3	1195.1	1194.2
7.5°	1188.9	1186.3	1176.6	1185.4	1183.6
10°	1175.7	1174.0	1163.4	1170.4	1170.4
12.5°	1159.9	1157.2	1146.7	1152.8	1152.0
15°	1139.6	1137.9	1127.3	1133.5	1130.8
17.5°	1118.5	1114.1	1104.4	1109.7	1106.2
20°	1093.0	1089.5	1077.2	1081.6	1079.8
22.5°	1064.0	1059.6	1048.1	1050.8	1049.9
25°	1032.3	1028.8	1017.3	1020.0	1015.6
27.5°	999.7	995.3	984.8	984.8	980.4
30°	965.4	961.0	948.7	948.7	941.6
32.5°	928.4	924.9	910.0	909.1	907.3
35°	889.7	884.4	873.9	868.6	866.0
37.5°	851.0	846.6	835.2	828.1	823.7
40°	809.6	807.0	793.8	787.6	781.5
42.5°	769.2	766.5	752.4	741.9	739.2
45°	726.9	725.1	711.1	700.5	697.9
47.5°	684.7	682.9	668.8	657.4	653.0
50°	638.9	638.9	625.7	614.3	611.6
52.5°	594.9	594.0	580.8	569.4	566.7
55°	550.9	550.0	535.9	524.5	521.9
57.5°	509.5	504.3	491.9	483.1	474.3
60°	462.0	459.4	448.8	437.4	433.0
62.5°	418.0	414.5	403.9	394.3	388.1
65°	372.3	369.6	359.1	351.1	346.7
67.5°	329.1	325.6	315.1	308.9	305.4
70°	282.5	279.9	271.9	264.0	263.1
72.5°	241.1	237.6	233.2	226.2	222.6
75°	197.1	193.6	191.0	187.4	182.2
77.5°	154.9	153.1	151.4	148.7	146.1
80°	115.3	115.3	114.4	112.6	111.8
82.5°	81.8	82.7	80.1	78.3	78.3
85°	50.2	50.2	50.2	48.4	47.5
87.5°	24.6	22.0	22.0	20.2	20.2
90°	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	18.75	20.37	19.12	20.68	21.00	18.42	20.03	18.78	20.35	20.66
	3H	20.51	21.97	20.89	22.30	22.66	20.13	21.59	20.51	21.92	22.28
	4H	21.16	22.53	21.56	22.88	23.26	20.77	22.14	21.17	22.49	22.86
	6H	21.62	22.90	22.03	23.26	23.65	21.24	22.52	21.65	22.88	23.27
	8H	21.77	22.99	22.20	23.38	23.77	21.40	22.61	21.82	23.00	23.40
	12H	21.87	23.04	22.30	23.42	23.85	21.50	22.66	21.93	23.04	23.47
4H	2H	19.33	20.70	19.72	21.05	21.42	19.06	20.43	19.46	20.78	21.16
	3H	21.31	22.46	21.72	22.86	23.26	20.99	22.14	21.40	22.54	22.94
	4H	22.08	23.12	22.52	23.54	23.97	21.76	22.80	22.19	23.21	23.65
	6H	22.67	23.58	23.13	24.02	24.48	22.36	23.27	22.81	23.71	24.16
	8H	22.87	23.72	23.33	24.16	24.63	22.56	23.41	23.02	23.85	24.32
	12H	23.02	23.78	23.50	24.26	24.73	22.70	23.47	23.18	23.94	24.41
8H	4H	22.37	23.22	22.83	23.66	24.12	22.08	22.93	22.54	23.37	23.84
	6H	23.07	23.78	23.57	24.27	24.75	22.80	23.51	23.29	23.99	24.47
	8H	23.35	23.98	23.86	24.49	24.97	23.07	23.70	23.58	24.21	24.70
	12H	23.57	24.13	24.07	24.62	25.18	23.29	23.85	23.79	24.34	24.90
12H	4H	22.39	23.16	22.87	23.63	24.10	22.11	22.88	22.59	23.35	23.82
	6H	23.12	23.76	23.63	24.27	24.75	22.86	23.49	23.37	24.00	24.49
	8H	23.45	24.02	23.96	24.51	25.07	23.19	23.75	23.69	24.24	24.80