

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: P243657

Luminaire Tested: S125DRP-H850D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243657  
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-H850D940-X4F0-XX-UDD-F-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

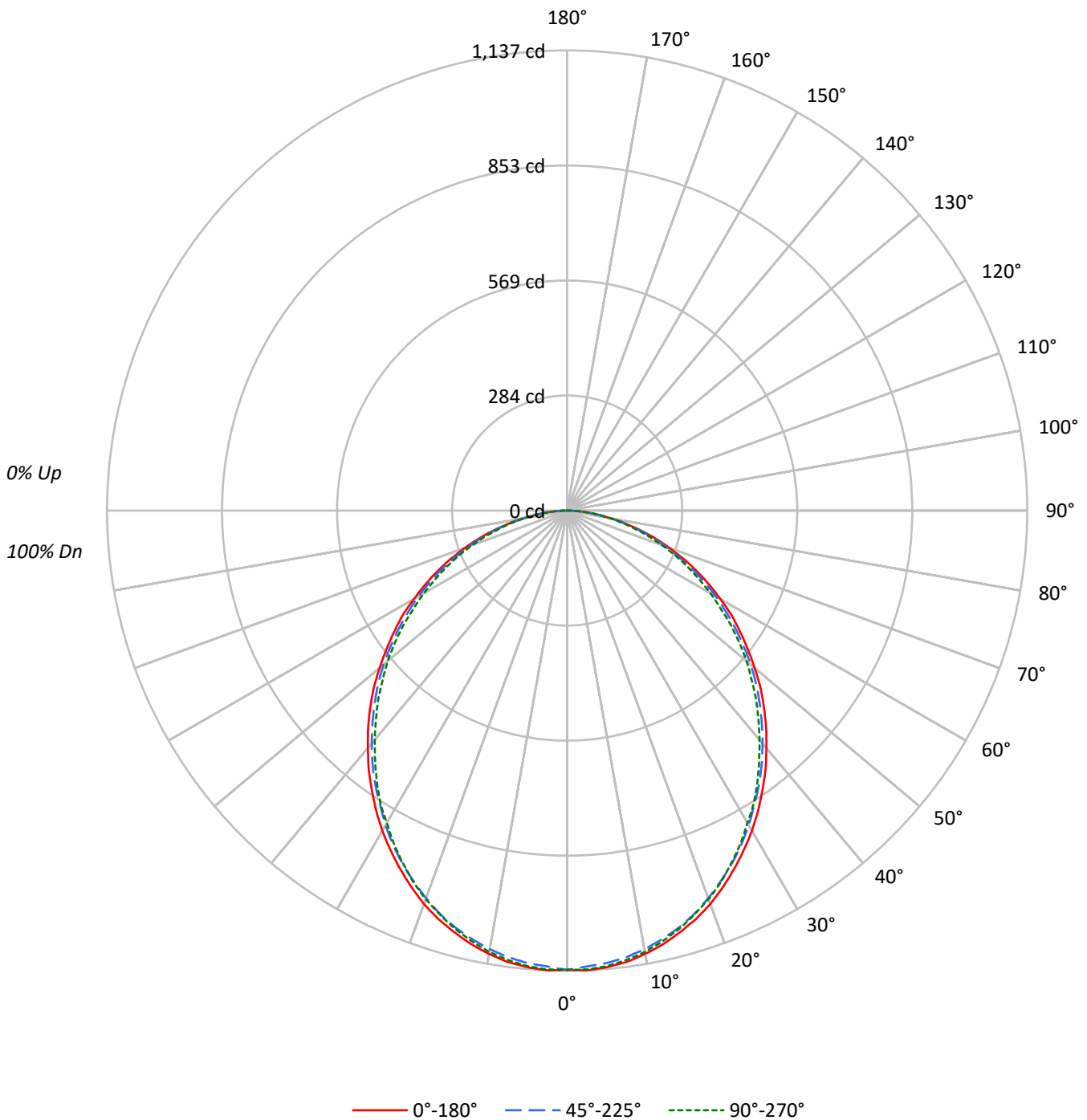
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2929.3 lumens  
Efficiency: N/A  
Efficacy: 124.1 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 (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	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°	8065	8065	8065
5°	8078	8007	8061
10°	8027	7944	7991
15°	7933	7847	7872
20°	7821	7708	7727
25°	7659	7548	7535
30°	7495	7366	7311
35°	7303	7173	7109
40°	7107	6968	6859
45°	6912	6762	6636
50°	6683	6546	6398
55°	6458	6282	6118
60°	6213	6036	5822
65°	5923	5713	5516
70°	5555	5347	5172
75°	5121	4962	4731
80°	4465	4429	4326
85°	3874	3874	3670

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6912 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.0	3.7
10°-20°	302.1	10.3
20°-30°	445.4	15.2
30°-40°	518.6	17.7
40°-50°	519.7	17.7
50°-60°	454.3	15.5
60°-70°	337.2	11.5
70°-80°	191.2	6.5
80°-90°	53.6	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°	854.5	29.2
0°-40°	1373.2	46.9
0°-60°	2347.2	80.1
0°-90°	2929.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2929.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1135	1135	1135	1135	1135	
5°	1132	1131	1122	1131	1130	107
15°	1078	1076	1066	1072	1070	304
25°	977	973	962	965	961	450
35°	842	837	827	822	819	527
45°	688	686	673	663	660	530
55°	521	520	507	496	494	467
65°	352	350	340	332	328	349
75°	186	183	181	177	172	198
85°	48	48	48	46	45	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1134.8	1134.8	1134.8	1134.8	1134.8
2.5°	1137.3	1135.6	1127.3	1135.6	1134.8
5°	1132.3	1130.6	1122.3	1130.6	1129.8
7.5°	1124.8	1122.3	1113.2	1121.5	1119.8
10°	1112.3	1110.7	1100.7	1107.3	1107.3
12.5°	1097.3	1094.8	1084.8	1090.7	1089.8
15°	1078.2	1076.5	1066.5	1072.4	1069.9
17.5°	1058.2	1054.0	1044.9	1049.9	1046.5
20°	1034.1	1030.7	1019.1	1023.2	1021.6
22.5°	1006.6	1002.4	991.6	994.1	993.3
25°	976.6	973.3	962.5	965.0	960.8
27.5°	945.8	941.6	931.7	931.7	927.5
30°	913.3	909.2	897.5	897.5	890.9
32.5°	878.4	875.0	860.9	860.0	858.4
35°	841.7	836.7	826.7	821.8	819.3
37.5°	805.1	800.9	790.1	783.5	779.3
40°	766.0	763.5	751.0	745.2	739.3
42.5°	727.7	725.2	711.9	701.9	699.4
45°	687.7	686.0	672.7	662.7	660.2
47.5°	647.7	646.1	632.8	621.9	617.8
50°	604.4	604.4	592.0	581.1	578.6
52.5°	562.8	562.0	549.5	538.7	536.2
55°	521.2	520.4	507.0	496.2	493.7
57.5°	482.1	477.1	465.4	457.1	448.8
60°	437.1	434.6	424.6	413.8	409.6
62.5°	395.5	392.1	382.2	373.0	367.2
65°	352.2	349.7	339.7	332.2	328.0
67.5°	311.4	308.1	298.1	292.2	288.9
70°	267.3	264.8	257.3	249.8	248.9
72.5°	228.1	224.8	220.6	214.0	210.6
75°	186.5	183.2	180.7	177.3	172.3
77.5°	146.5	144.9	143.2	140.7	138.2
80°	109.1	109.1	108.2	106.6	105.7
82.5°	77.4	78.3	75.8	74.1	74.1
85°	47.5	47.5	47.5	45.8	45.0
87.5°	23.3	20.8	20.8	19.1	19.1
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	18.56	20.18	18.93	20.49	20.80	18.23	19.84	18.59	20.15	20.47
	3H	20.32	21.78	20.70	22.10	22.47	19.94	21.40	20.31	21.72	22.08
	4H	20.97	22.34	21.37	22.69	23.07	20.58	21.95	20.97	22.30	22.67
	6H	21.43	22.70	21.84	23.07	23.46	21.05	22.32	21.46	22.69	23.08
	8H	21.58	22.79	22.00	23.18	23.58	21.20	22.42	21.63	22.81	23.21
	12H	21.68	22.84	22.11	23.23	23.65	21.31	22.47	21.74	22.85	23.28
4H	2H	19.13	20.51	19.53	20.85	21.23	18.87	20.24	19.27	20.59	20.96
	3H	21.12	22.27	21.52	22.66	23.06	20.80	21.95	21.21	22.34	22.74
	4H	21.89	22.93	22.32	23.35	23.78	21.56	22.60	22.00	23.02	23.45
	6H	22.48	23.39	22.94	23.83	24.29	22.17	23.07	22.62	23.51	23.97
	8H	22.68	23.53	23.14	23.97	24.44	22.36	23.22	22.83	23.66	24.12
	12H	22.83	23.59	23.31	24.06	24.53	22.51	23.27	22.99	23.75	24.22
8H	4H	22.17	23.02	22.63	23.47	23.93	21.89	22.74	22.35	23.18	23.64
	6H	22.88	23.59	23.38	24.08	24.55	22.61	23.31	23.10	23.80	24.28
	8H	23.16	23.79	23.67	24.30	24.78	22.88	23.51	23.39	24.02	24.50
	12H	23.38	23.94	23.88	24.43	24.99	23.09	23.66	23.60	24.15	24.71
12H	4H	22.20	22.97	22.68	23.44	23.91	21.92	22.68	22.40	23.16	23.63
	6H	22.93	23.57	23.44	24.07	24.56	22.66	23.30	23.17	23.81	24.29
	8H	23.26	23.82	23.77	24.31	24.87	22.99	23.56	23.50	24.05	24.61