

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: P242842

Luminaire Tested: S125DRP-S850D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242842  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-S850D830-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

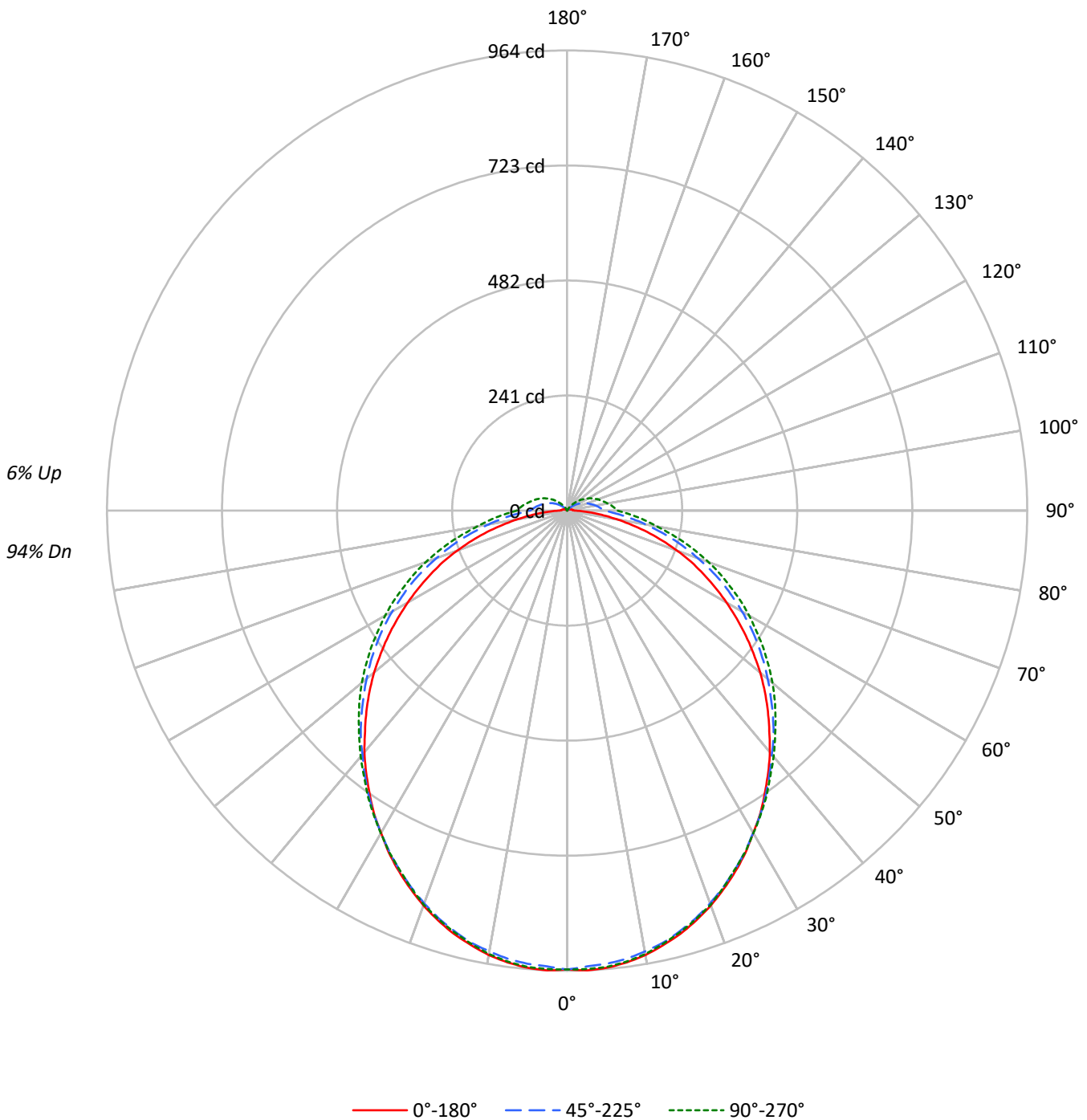
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2978.2 lumens  
Efficiency: N/A  
Efficacy: 112.8 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): 26.4  
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	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°	6833	6833	6833
5°	6846	6701	6720
10°	6797	6576	6563
15°	6716	6428	6364
20°	6606	6245	6165
25°	6476	6051	5923
30°	6319	5838	5703
35°	6171	5642	5500
40°	6021	5434	5297
45°	5852	5257	5115
50°	5690	5064	4953
55°	5495	4881	4763
60°	5283	4672	4570
65°	5061	4454	4351
70°	4809	4156	4125
75°	4408	3868	3849
80°	3885	3517	3544
85°	3391	3262	3421

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5852 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.0	3.1
10°-20°	258.3	8.7
20°-30°	384.0	12.9
30°-40°	454.8	15.3
40°-50°	470.2	15.8
50°-60°	433.1	14.5
60°-70°	350.2	11.8
70°-80°	234.3	7.9
80°-90°	121.1	4.1
90°-100°	68.2	2.3
100°-110°	50.3	1.7
110°-120°	33.7	1.1
120°-130°	19.1	0.6
130°-140°	8.3	0.3
140°-150°	1.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	733.3	24.6
0°-40°	1188.1	39.9
0°-60°	2091.4	70.2
0°-90°	2797.0	93.9
90°-120°	152.2	5.1
90°-150°	181.2	6.1
90°-180°	181.0	6.1
0°-180°	2978.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	961	960	953	960	960	91
15°	918	919	912	918	914	259
25°	834	837	831	835	830	384
35°	722	729	726	729	729	452
45°	595	605	610	616	617	459
55°	457	472	487	498	501	409
65°	315	336	359	373	377	312
75°	173	198	228	247	252	184
85°	52	83	116	137	144	54
90°	15	45	77	99	106	10
95°	12	37	69	90	96	10
105°	8	24	52	71	77	9
115°	6	12	37	54	59	6
125°	4	3	22	37	42	3
135°	2	1	8	20	24	1
145°	1	0	0	5	8	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°	961.4	961.4	961.4	961.4	961.4
2.5°	964.2	962.3	955.7	962.3	961.4
5°	961.4	959.5	952.9	960.5	959.5
7.5°	954.8	953.9	947.3	953.9	952.9
10°	945.4	945.4	937.8	944.4	943.5
12.5°	932.2	933.1	927.5	932.2	929.3
15°	918.0	919.0	912.4	918.0	914.3
17.5°	900.1	902.0	895.4	900.1	897.3
20°	880.3	882.2	875.6	878.4	878.4
22.5°	857.7	861.5	853.9	857.7	854.9
25°	834.1	837.0	831.3	835.1	830.4
27.5°	808.7	812.5	805.9	808.7	806.8
30°	779.5	785.1	779.5	781.4	780.4
32.5°	753.1	757.8	754.0	755.9	755.0
35°	722.0	728.6	725.8	728.6	728.6
37.5°	691.8	697.5	696.5	700.3	699.4
40°	660.7	668.3	667.3	671.1	673.0
42.5°	626.8	637.2	640.0	644.7	644.7
45°	594.7	605.1	609.8	616.4	617.4
47.5°	561.8	571.2	578.7	588.1	590.0
50°	527.8	538.2	548.6	558.9	561.8
52.5°	492.0	505.2	518.4	529.7	531.6
55°	457.1	472.2	487.3	497.7	501.4
57.5°	421.3	439.2	456.2	467.5	470.3
60°	385.5	404.4	423.2	437.3	440.2
62.5°	350.6	369.5	390.2	406.2	410.0
65°	314.8	336.5	359.1	373.2	377.0
67.5°	281.8	302.6	325.2	342.1	346.9
70°	245.1	266.7	291.2	309.2	314.8
72.5°	209.2	231.9	259.2	279.0	282.8
75°	173.4	197.9	228.1	246.9	251.7
77.5°	138.6	166.8	195.1	215.8	219.6
80°	106.5	134.8	166.8	187.6	191.3
82.5°	77.3	107.4	140.4	160.2	167.8
85°	51.8	82.9	115.9	136.7	144.2
87.5°	33.0	63.2	95.2	116.9	123.5
90°	15.1	45.2	77.3	99.0	105.6
92.5°	13.2	40.5	73.5	94.3	100.9
95°	12.3	36.8	68.8	89.5	96.1
97.5°	11.3	33.9	65.0	84.8	91.4
100°	10.4	30.2	60.3	80.1	85.8
102.5°	9.4	27.3	56.6	75.4	81.1
105°	8.5	23.6	51.8	70.7	77.3
107.5°	7.5	20.7	48.1	66.9	72.6
110°	6.6	17.9	44.3	62.2	68.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.6	15.1	40.5	57.5	64.1
115°	5.7	12.3	36.8	53.7	59.4
117.5°	4.7	9.4	33.0	49.0	55.6
120°	4.7	7.5	29.2	45.2	50.9
122.5°	3.8	4.7	25.4	40.5	46.2
125°	3.8	2.8	21.7	36.8	41.5
127.5°	2.8	1.9	17.9	32.0	37.7
130°	2.8	1.9	15.1	28.3	33.0
132.5°	1.9	1.9	11.3	24.5	28.3
135°	1.9	0.9	7.5	19.8	24.5
137.5°	1.9	0.9	4.7	16.0	19.8
140°	0.9	0.9	1.9	12.3	16.0
142.5°	0.9	0.0	0.0	8.5	12.3
145°	0.9	0.0	0.0	4.7	8.5
147.5°	0.0	0.0	0.0	1.9	3.8
150°	0.0	0.0	0.0	0.0	0.9
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	16.60	18.13	17.05	18.57	19.03	17.64	19.17	18.09	19.61	20.07
	3H	18.25	19.64	18.72	20.09	20.59	19.82	21.21	20.29	21.66	22.16
	4H	18.82	20.13	19.31	20.60	21.12	20.78	22.10	21.27	22.56	23.08
	6H	19.19	20.42	19.70	20.90	21.44	21.68	22.90	22.18	23.38	23.92
	8H	19.30	20.47	19.82	20.98	21.52	22.11	23.28	22.63	23.79	24.33
	12H	19.36	20.48	19.88	20.98	21.55	22.57	23.69	23.09	24.19	24.76
4H	2H	17.36	18.67	17.85	19.14	19.66	18.17	19.49	18.66	19.96	20.48
	3H	19.24	20.35	19.74	20.86	21.41	20.56	21.68	21.07	22.19	22.73
	4H	19.94	20.96	20.46	21.48	22.05	21.68	22.70	22.20	23.22	23.79
	6H	20.45	21.34	20.99	21.89	22.48	22.74	23.64	23.29	24.19	24.78
	8H	20.60	21.44	21.15	21.99	22.59	23.26	24.10	23.81	24.65	25.25
	12H	20.70	21.46	21.27	22.04	22.64	23.82	24.58	24.39	25.16	25.77
8H	4H	20.42	21.26	20.97	21.81	22.41	21.94	22.78	22.49	23.33	23.93
	6H	21.09	21.79	21.67	22.39	23.00	23.16	23.87	23.74	24.46	25.07
	8H	21.32	21.96	21.92	22.57	23.19	23.80	24.43	24.39	25.04	25.66
	12H	21.51	22.07	22.10	22.67	23.35	24.51	25.08	25.11	25.67	26.36
12H	4H	20.52	21.28	21.09	21.86	22.47	21.95	22.72	22.53	23.29	23.90
	6H	21.25	21.89	21.84	22.49	23.11	23.21	23.85	23.80	24.45	25.07
	8H	21.57	22.13	22.16	22.73	23.41	23.91	24.48	24.51	25.07	25.76