

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: P243711

Luminaire Tested: S125DRP-H850D840-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243711  
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-H850D840-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

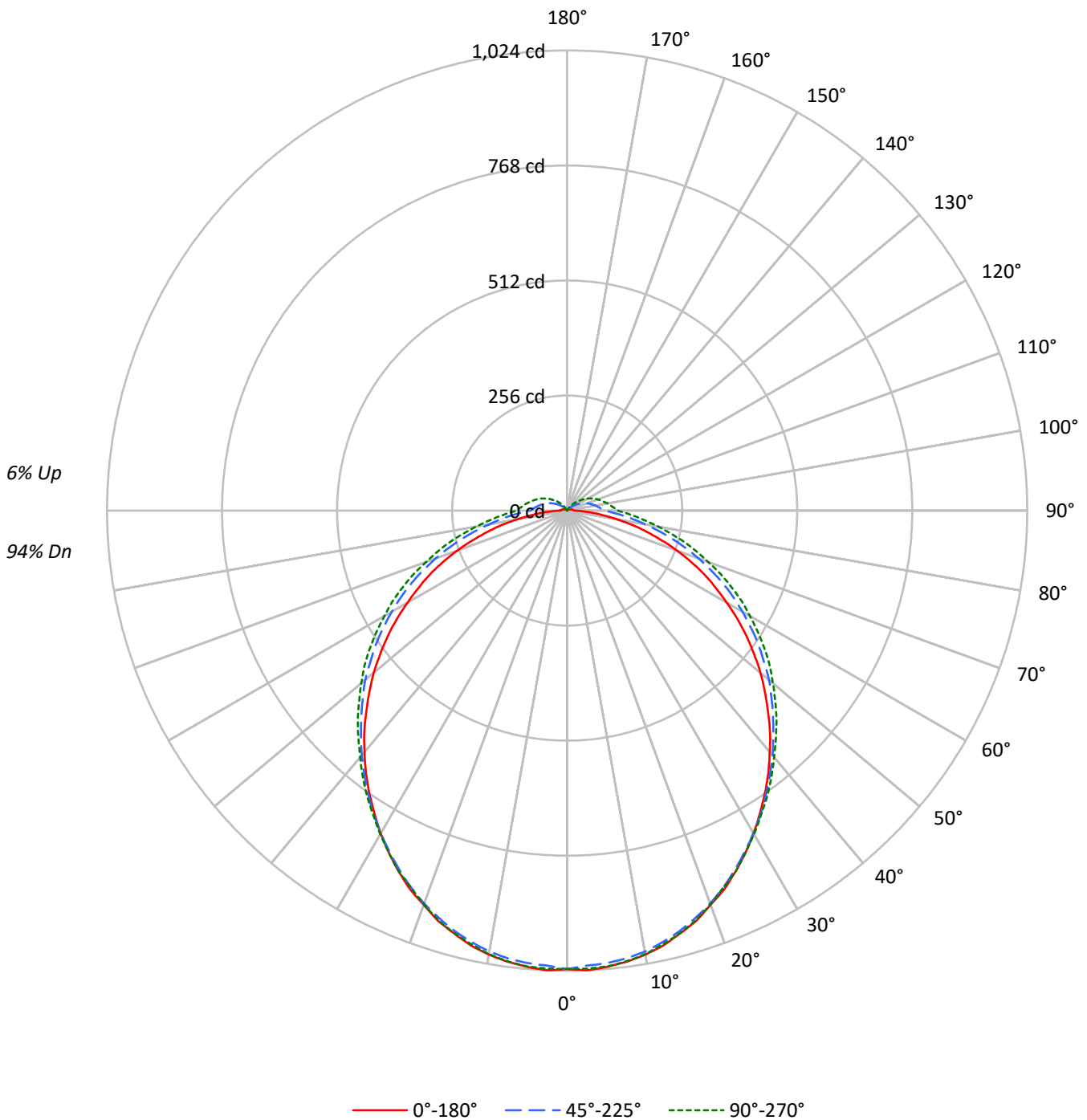
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3167.7 lumens  
Efficiency: N/A  
Efficacy: 134.2 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): 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	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°	7251	7251	7251
5°	7259	7108	7132
10°	7213	6988	6971
15°	7126	6821	6773
20°	7006	6638	6545
25°	6881	6424	6322
30°	6726	6207	6077
35°	6560	5995	5858
40°	6393	5789	5640
45°	6216	5584	5461
50°	6059	5414	5271
55°	5861	5204	5096
60°	5621	4976	4875
65°	5427	4737	4658
70°	5105	4442	4374
75°	4675	4093	4124
80°	4162	3717	3809
85°	3705	3476	3623

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6216 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.5	3.0
10°-20°	274.3	8.7
20°-30°	408.3	12.9
30°-40°	483.7	15.3
40°-50°	500.5	15.8
50°-60°	461.6	14.6
60°-70°	373.0	11.8
70°-80°	249.3	7.9
80°-90°	128.6	4.1
90°-100°	72.1	2.3
100°-110°	53.5	1.7
110°-120°	35.6	1.1
120°-130°	19.9	0.6
130°-140°	8.9	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°	779.1	24.6
0°-40°	1262.8	39.9
0°-60°	2224.8	70.2
0°-90°	2975.7	93.9
90°-120°	161.2	5.1
90°-150°	192.0	6.1
90°-180°	192.0	6.1
0°-180°	3167.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1020	1020	1020	1020	1020	
5°	1019	1018	1011	1018	1018	97
15°	974	977	968	974	973	275
25°	886	890	882	887	886	408
35°	768	773	771	775	776	480
45°	632	642	648	658	659	488
55°	488	503	520	532	536	436
65°	338	357	382	399	404	333
75°	184	211	241	262	270	195
85°	57	89	124	145	153	58
90°	16	47	82	105	112	11
95°	13	40	73	94	101	10
105°	9	26	56	75	82	10
115°	7	13	39	57	63	6
125°	4	4	23	37	43	4
135°	2	2	8	22	26	2
145°	1	0	0	6	8	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°	1020.2	1020.2	1020.2	1020.2	1020.2
2.5°	1024.0	1021.2	1013.6	1021.2	1020.2
5°	1019.3	1018.3	1010.8	1018.3	1018.3
7.5°	1012.7	1011.7	1005.1	1012.7	1011.7
10°	1003.2	1003.2	996.6	1002.3	1002.3
12.5°	991.0	991.0	983.4	990.0	988.2
15°	974.0	976.8	968.3	974.0	973.1
17.5°	957.0	957.0	950.4	955.1	955.1
20°	933.5	937.2	930.6	935.3	932.5
22.5°	912.7	914.6	908.0	912.7	908.0
25°	886.3	890.1	882.5	887.3	886.3
27.5°	859.0	861.8	856.1	861.8	859.0
30°	829.7	832.6	828.8	832.6	831.6
32.5°	798.6	804.3	801.5	804.3	803.3
35°	767.5	773.2	771.3	775.1	776.0
37.5°	735.5	741.1	741.1	745.8	746.8
40°	701.5	709.1	710.9	717.5	716.6
42.5°	668.5	676.1	678.9	687.4	687.4
45°	631.7	642.1	647.8	658.1	659.1
47.5°	596.9	608.2	616.7	626.1	628.0
50°	562.0	572.3	586.5	595.9	597.8
52.5°	524.2	537.4	551.6	564.8	568.6
55°	487.5	502.6	519.5	531.8	536.5
57.5°	449.8	465.8	484.6	499.7	503.5
60°	410.2	429.0	450.7	465.8	469.6
62.5°	373.4	394.1	416.8	432.8	438.4
65°	337.6	357.4	381.9	398.8	403.6
67.5°	298.9	320.6	346.0	364.9	369.6
70°	260.2	283.8	311.2	329.1	333.8
72.5°	220.6	247.0	276.3	296.1	301.7
75°	183.9	211.2	241.4	262.1	269.7
77.5°	149.0	177.3	207.4	229.1	235.7
80°	114.1	143.3	176.3	199.0	205.6
82.5°	83.0	114.1	148.0	170.7	177.3
85°	56.6	88.6	123.5	145.2	152.7
87.5°	34.9	66.0	101.8	123.5	131.1
90°	16.0	47.1	82.0	104.7	112.2
92.5°	14.1	43.4	77.3	99.9	106.5
95°	13.2	39.6	72.6	94.3	100.9
97.5°	12.3	35.8	67.9	89.6	96.2
100°	11.3	32.1	64.1	84.9	91.5
102.5°	10.4	29.2	59.4	80.1	85.8
105°	9.4	25.5	55.6	75.4	82.0
107.5°	8.5	21.7	51.9	70.7	77.3
110°	7.5	18.9	47.1	66.0	72.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.6	16.0	43.4	61.3	67.9
115°	6.6	13.2	38.7	56.6	63.2
117.5°	5.7	10.4	33.9	51.9	58.5
120°	4.7	7.5	30.2	47.1	53.7
122.5°	4.7	5.7	26.4	42.4	49.0
125°	3.8	3.8	22.6	36.8	43.4
127.5°	3.8	2.8	18.9	33.0	37.7
130°	2.8	1.9	16.0	29.2	33.9
132.5°	2.8	1.9	12.3	25.5	30.2
135°	1.9	1.9	8.5	21.7	25.5
137.5°	1.9	0.9	5.7	17.0	21.7
140°	0.9	0.9	1.9	13.2	17.0
142.5°	0.9	0.9	0.9	9.4	13.2
145°	0.9	0.0	0.0	5.7	8.5
147.5°	0.9	0.0	0.0	1.9	4.7
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	16.80	18.33	17.25	18.77	19.23	17.89	19.42	18.34	19.86	20.32
	3H	18.45	19.84	18.92	20.29	20.79	20.05	21.44	20.52	21.89	22.40
	4H	19.02	20.34	19.51	20.80	21.32	21.01	22.33	21.50	22.80	23.32
	6H	19.40	20.63	19.91	21.11	21.64	21.92	23.14	22.42	23.62	24.16
	8H	19.51	20.68	20.03	21.19	21.73	22.35	23.52	22.86	24.02	24.56
	12H	19.57	20.70	20.09	21.20	21.77	22.80	23.92	23.32	24.42	24.99
4H	2H	17.56	18.88	18.05	19.35	19.87	18.41	19.73	18.91	20.20	20.72
	3H	19.44	20.56	19.95	21.07	21.61	20.80	21.91	21.30	22.42	22.97
	4H	20.15	21.17	20.67	21.69	22.26	21.91	22.93	22.43	23.45	24.02
	6H	20.66	21.56	21.20	22.11	22.70	22.98	23.87	23.52	24.42	25.01
	8H	20.81	21.66	21.36	22.20	22.81	23.49	24.33	24.04	24.88	25.48
	12H	20.92	21.68	21.49	22.26	22.86	24.04	24.80	24.61	25.38	25.99
8H	4H	20.63	21.47	21.18	22.02	22.62	22.16	23.01	22.71	23.55	24.16
	6H	21.30	22.01	21.88	22.60	23.21	23.39	24.10	23.97	24.69	25.30
	8H	21.54	22.18	22.13	22.78	23.40	24.02	24.66	24.62	25.26	25.88
	12H	21.72	22.29	22.32	22.88	23.57	24.73	25.30	25.32	25.89	26.58
12H	4H	20.73	21.49	21.30	22.07	22.67	22.18	22.94	22.75	23.52	24.13
	6H	21.46	22.10	22.05	22.70	23.32	23.43	24.07	24.03	24.68	25.30
	8H	21.78	22.35	22.37	22.94	23.62	24.14	24.71	24.73	25.30	25.98