

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: G3-1802-639-12

Luminaire Tested: S125DRP-S850D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: G3-1802-639-12  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-S850D835-X4F0-XX-UDD-F-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

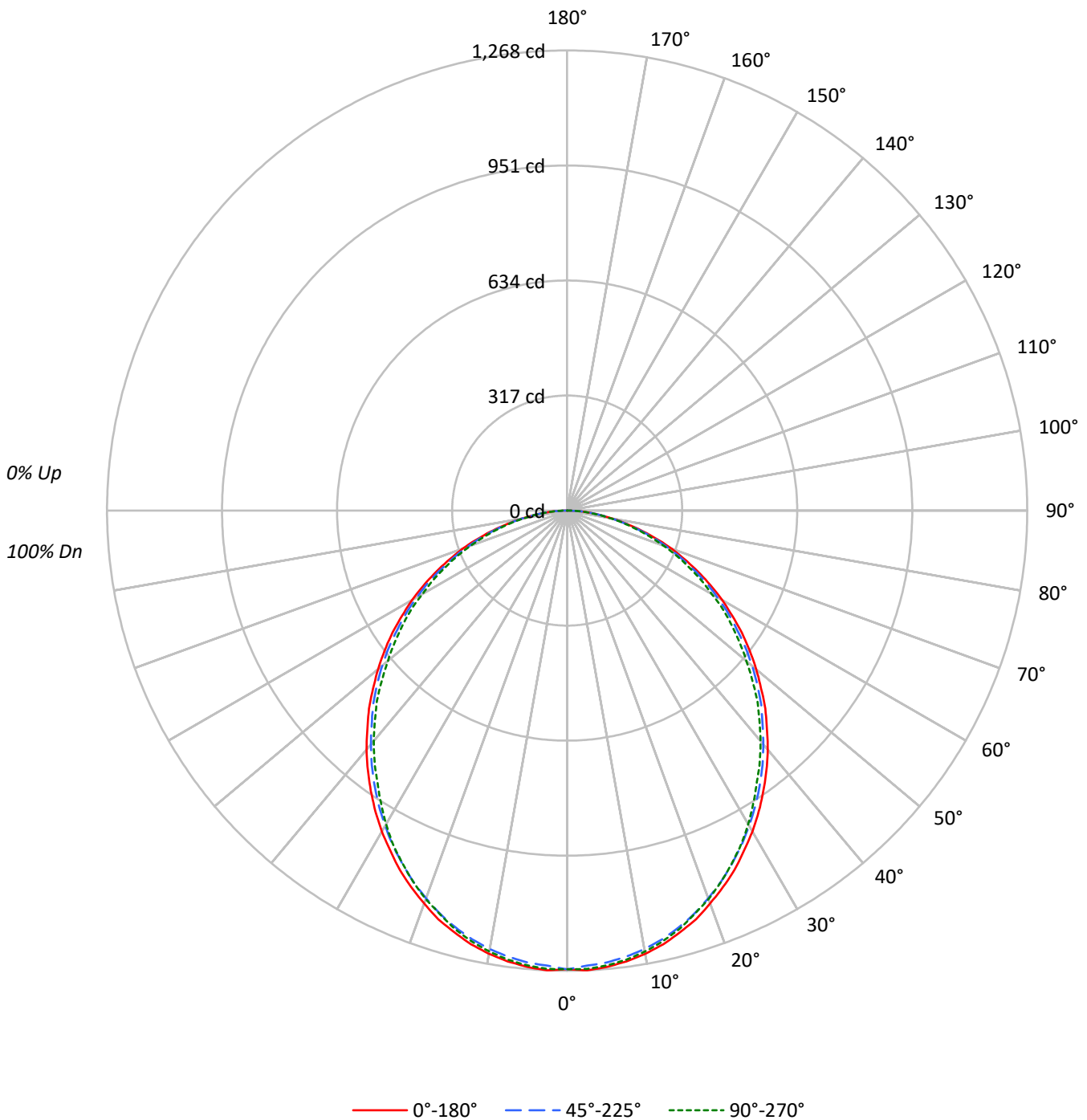
Lumens per Lamp: N/A  
Luminaire Lumens: 3289.9 lumens  
Efficiency: N/A  
Efficacy: 124.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.3  
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')  
CIE Type: Direct

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	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	94	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	72	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59																												
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51																												
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44																												
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39																												
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34																												
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31																												
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28																												
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25																												

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

	0°	45°	90°
0°	8984	8984	8984
5°	9004	8918	8975
10°	8949	8855	8906
15°	8852	8749	8786
20°	8713	8600	8615
25°	8564	8422	8415
30°	8379	8231	8190
35°	8182	8026	7913
40°	7979	7803	7691
45°	7760	7599	7448
50°	7519	7353	7132
55°	7286	7075	6877
60°	7008	6795	6553
65°	6677	6458	6239
70°	6359	6068	5860
75°	5794	5602	5410
80°	5157	5075	4952
85°	4485	4567	4322

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7760 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.3	3.6
10°-20°	336.9	10.2
20°-30°	497.4	15.1
30°-40°	580.3	17.6
40°-50°	582.8	17.7
50°-60°	511.6	15.6
60°-70°	381.1	11.6
70°-80°	217.7	6.6
80°-90°	62.8	1.9
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°	953.6	29.0
0°-40°	1533.9	46.6
0°-60°	2628.3	79.9
0°-90°	3289.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3289.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1264	1264	1264	1264	1264	
5°	1262	1260	1250	1259	1258	120
15°	1203	1200	1189	1194	1194	339
25°	1092	1087	1074	1076	1073	502
35°	943	939	925	920	912	590
45°	772	768	756	744	741	595
55°	588	585	571	562	555	525
65°	397	395	384	375	371	394
75°	211	209	204	201	197	225
85°	55	56	56	55	53	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1264	1264	1264	1264	1264
2.5°	1268	1265	1255	1265	1264
5°	1262	1260	1250	1259	1258
7.5°	1253	1251	1240	1249	1248
10°	1240	1238	1227	1235	1234
12.5°	1224	1220	1210	1216	1216
15°	1203	1200	1189	1194	1194
17.5°	1181	1176	1165	1171	1166
20°	1152	1150	1137	1144	1139
22.5°	1123	1119	1107	1111	1108
25°	1092	1087	1074	1076	1073
27.5°	1056	1053	1040	1041	1038
30°	1021	1018	1003	1001	998
32.5°	983	978	965	961	955
35°	943	939	925	920	912
37.5°	902	897	884	877	872
40°	860	855	841	832	829
42.5°	815	811	797	789	784
45°	772	768	756	744	741
47.5°	725	726	711	699	692
50°	680	677	665	652	645
52.5°	634	632	619	608	600
55°	588	585	571	562	555
57.5°	539	538	526	514	511
60°	493	489	478	468	461
62.5°	445	442	433	422	417
65°	397	395	384	375	371
67.5°	350	346	338	330	328
70°	306	301	292	286	282
72.5°	258	255	250	243	239
75°	211	209	204	201	197
77.5°	167	166	163	161	158
80°	126	126	124	123	121
82.5°	90	88	88	86	86
85°	55	56	56	55	53
87.5°	27	27	26	26	24
90°	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	18.98	20.60	19.34	20.91	21.22	18.65	20.27	19.01	20.58	20.90
	3H	20.75	22.21	21.12	22.54	22.90	20.38	21.84	20.76	22.17	22.53
	4H	21.40	22.78	21.80	23.13	23.50	21.03	22.40	21.43	22.75	23.13
	6H	21.88	23.16	22.29	23.52	23.91	21.51	22.79	21.92	23.15	23.55
	8H	22.04	23.26	22.46	23.64	24.04	21.68	22.89	22.10	23.28	23.68
	12H	22.14	23.31	22.57	23.69	24.12	21.79	22.95	22.21	23.33	23.76
4H	2H	19.56	20.93	19.95	21.28	21.66	19.30	20.67	19.69	21.02	21.40
	3H	21.55	22.71	21.96	23.10	23.50	21.25	22.40	21.66	22.80	23.20
	4H	22.34	23.38	22.77	23.79	24.23	22.02	23.07	22.45	23.48	23.92
	6H	22.95	23.86	23.40	24.30	24.75	22.64	23.55	23.09	23.99	24.45
	8H	23.15	24.00	23.61	24.45	24.91	22.85	23.70	23.31	24.14	24.61
	12H	23.30	24.07	23.78	24.55	25.02	23.00	23.77	23.48	24.24	24.71
8H	4H	22.62	23.48	23.08	23.92	24.39	22.35	23.20	22.81	23.64	24.11
	6H	23.35	24.06	23.85	24.55	25.03	23.09	23.80	23.58	24.28	24.76
	8H	23.63	24.27	24.14	24.78	25.26	23.37	24.01	23.88	24.51	25.00
	12H	23.86	24.43	24.37	24.92	25.48	23.60	24.17	24.11	24.66	25.22
12H	4H	22.65	23.42	23.13	23.90	24.37	22.38	23.15	22.86	23.63	24.09
	6H	23.41	24.04	23.91	24.55	25.04	23.15	23.79	23.66	24.29	24.78
	8H	23.74	24.31	24.25	24.80	25.36	23.49	24.05	24.00	24.54	25.10