

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: P242861

Luminaire Tested: S125DRP-S850D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242861
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-S850D935-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

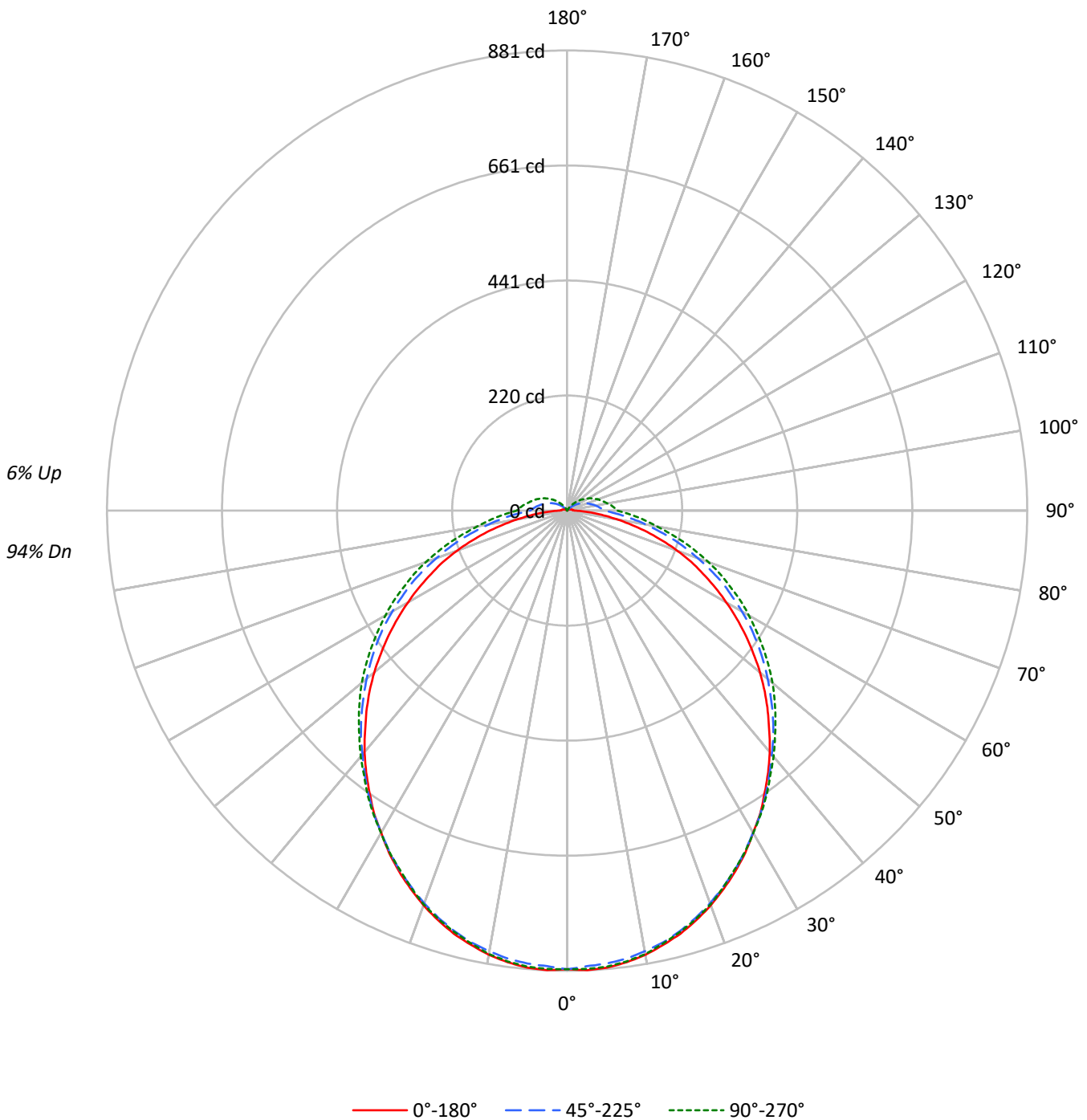
Lumens per Lamp: N/A
Luminaire Lumens: 2720.6 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

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

TEST NUMBER: P242861

CATALOG NUMBER: S125DRP-S850D935-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot





TEST NUMBER: P242861

CATALOG NUMBER: S125DRP-S850D935-X4F0-XX-UDD-D-W

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°	6242	6242	6242
5°	6254	6122	6139
10°	6209	6007	5995
15°	6135	5871	5813
20°	6035	5705	5633
25°	5916	5527	5410
30°	5772	5332	5209
35°	5637	5154	5025
40°	5501	4964	4838
45°	5346	4803	4673
50°	5198	4626	4525
55°	5020	4459	4351
60°	4825	4268	4174
65°	4623	4068	3975
70°	4393	3796	3769
75°	4027	3534	3516
80°	3550	3213	3239
85°	3103	2981	3125

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5346 cd/sqm



TEST NUMBER: P242861

CATALOG NUMBER: S125DRP-S850D935-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.1	3.1
10°-20°	235.9	8.7
20°-30°	350.8	12.9
30°-40°	415.5	15.3
40°-50°	429.5	15.8
50°-60°	395.7	14.5
60°-70°	319.9	11.8
70°-80°	214.0	7.9
80°-90°	110.6	4.1
90°-100°	62.3	2.3
100°-110°	45.9	1.7
110°-120°	30.7	1.1
120°-130°	17.4	0.6
130°-140°	7.6	0.3
140°-150°	1.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	669.8	24.6
0°-40°	1085.3	39.9
0°-60°	1910.5	70.2
0°-90°	2555.1	93.9
90°-120°	139.0	5.1
90°-150°	165.5	6.1
90°-180°	166.0	6.1
0°-180°	2720.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	878	878	878	878	878	
5°	878	876	870	877	876	83
15°	839	840	833	839	835	236
25°	762	765	759	763	758	351
35°	660	666	663	666	666	413
45°	543	553	557	563	564	419
55°	418	431	445	455	458	373
65°	288	307	328	341	344	285
75°	158	181	208	226	230	168
85°	47	76	106	125	132	49
90°	14	41	71	90	96	10
95°	11	34	63	82	88	9
105°	8	22	47	65	71	8
115°	5	11	34	49	54	5
125°	3	3	20	34	38	3
135°	2	1	7	18	22	1
145°	1	0	0	4	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



TEST NUMBER: P242861

CATALOG NUMBER: S125DRP-S850D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	878.2	878.2	878.2	878.2	878.2
2.5°	880.8	879.1	873.1	879.1	878.2
5°	878.2	876.5	870.5	877.4	876.5
7.5°	872.2	871.3	865.3	871.3	870.5
10°	863.6	863.6	856.7	862.7	861.9
12.5°	851.5	852.4	847.2	851.5	848.9
15°	838.6	839.5	833.4	838.6	835.2
17.5°	822.3	824.0	817.9	822.3	819.7
20°	804.2	805.9	799.9	802.5	802.5
22.5°	783.5	787.0	780.1	783.5	780.9
25°	762.0	764.6	759.4	762.8	758.5
27.5°	738.7	742.2	736.2	738.7	737.0
30°	712.0	717.2	712.0	713.8	712.9
32.5°	687.9	692.2	688.8	690.5	689.7
35°	659.5	665.6	663.0	665.6	665.6
37.5°	632.0	637.1	636.3	639.7	638.9
40°	603.6	610.4	609.6	613.0	614.8
42.5°	572.6	582.0	584.6	588.9	588.9
45°	543.3	552.8	557.1	563.1	564.0
47.5°	513.2	521.8	528.7	537.3	539.0
50°	482.2	491.6	501.1	510.6	513.2
52.5°	449.4	461.5	473.5	483.9	485.6
55°	417.6	431.4	445.1	454.6	458.1
57.5°	384.9	401.2	416.7	427.1	429.6
60°	352.1	369.4	386.6	399.5	402.1
62.5°	320.3	337.5	356.5	371.1	374.5
65°	287.6	307.4	328.0	341.0	344.4
67.5°	257.4	276.4	297.0	312.5	316.8
70°	223.9	243.7	266.0	282.4	287.6
72.5°	191.1	211.8	236.8	254.9	258.3
75°	158.4	180.8	208.4	225.6	229.9
77.5°	126.6	152.4	178.2	197.2	200.6
80°	97.3	123.1	152.4	171.3	174.8
82.5°	70.6	98.2	128.3	146.4	153.3
85°	47.4	75.8	105.9	124.8	131.7
87.5°	30.1	57.7	87.0	106.8	112.8
90°	13.8	41.3	70.6	90.4	96.4
92.5°	12.1	37.0	67.2	86.1	92.1
95°	11.2	33.6	62.9	81.8	87.8
97.5°	10.3	31.0	59.4	77.5	83.5
100°	9.5	27.6	55.1	73.2	78.4
102.5°	8.6	25.0	51.7	68.9	74.0
105°	7.7	21.5	47.4	64.6	70.6
107.5°	6.9	18.9	43.9	61.1	66.3
110°	6.0	16.4	40.5	56.8	62.9



TEST NUMBER: P242861

CATALOG NUMBER: S125DRP-S850D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.0	13.8	37.0	52.5	58.5
115°	5.2	11.2	33.6	49.1	54.2
117.5°	4.3	8.6	30.1	44.8	50.8
120°	4.3	6.9	26.7	41.3	46.5
122.5°	3.4	4.3	23.2	37.0	42.2
125°	3.4	2.6	19.8	33.6	37.9
127.5°	2.6	1.7	16.4	29.3	34.4
130°	2.6	1.7	13.8	25.8	30.1
132.5°	1.7	1.7	10.3	22.4	25.8
135°	1.7	0.9	6.9	18.1	22.4
137.5°	1.7	0.9	4.3	14.6	18.1
140°	0.9	0.9	1.7	11.2	14.6
142.5°	0.9	0.0	0.0	7.7	11.2
145°	0.9	0.0	0.0	4.3	7.7
147.5°	0.0	0.0	0.0	1.7	3.4
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



TEST NUMBER: P242861
 CATALOG NUMBER: S125DRP-S850D935-X4F0-XX-UDD-D-W

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	16.28	17.81	16.74	18.25	18.72	17.32	18.86	17.78	19.29	19.76
	3H	17.93	19.32	18.40	19.77	20.28	19.50	20.89	19.97	21.34	21.85
	4H	18.50	19.82	18.99	20.29	20.81	20.46	21.78	20.95	22.25	22.77
	6H	18.88	20.11	19.38	20.59	21.12	21.36	22.59	21.87	23.07	23.60
	8H	18.98	20.16	19.50	20.66	21.20	21.79	22.97	22.31	23.47	24.01
	12H	19.05	20.17	19.57	20.67	21.24	22.25	23.38	22.78	23.88	24.45
4H	2H	17.04	18.36	17.53	18.83	19.35	17.86	19.17	18.35	19.64	20.16
	3H	18.92	20.04	19.43	20.55	21.09	20.25	21.37	20.75	21.88	22.42
	4H	19.62	20.64	20.15	21.17	21.74	21.36	22.38	21.89	22.90	23.48
	6H	20.13	21.03	20.68	21.58	22.17	22.43	23.32	22.97	23.87	24.46
	8H	20.28	21.13	20.83	21.67	22.28	22.95	23.79	23.50	24.34	24.94
	12H	20.38	21.15	20.96	21.72	22.33	23.50	24.27	24.08	24.84	25.45
8H	4H	20.11	20.95	20.66	21.50	22.10	21.62	22.46	22.17	23.01	23.61
	6H	20.77	21.48	21.35	22.07	22.68	22.84	23.55	23.43	24.14	24.75
	8H	21.01	21.65	21.61	22.25	22.87	23.48	24.12	24.08	24.72	25.34
	12H	21.19	21.76	21.79	22.35	23.04	24.19	24.76	24.79	25.35	26.04
12H	4H	20.21	20.97	20.78	21.55	22.15	21.64	22.40	22.21	22.98	23.59
	6H	20.93	21.57	21.53	22.18	22.80	22.89	23.53	23.49	24.14	24.76
	8H	21.25	21.82	21.85	22.41	23.10	23.60	24.17	24.20	24.76	25.45