

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: P242518

Luminaire Tested: S123DRP-S1000D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S1000D935-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

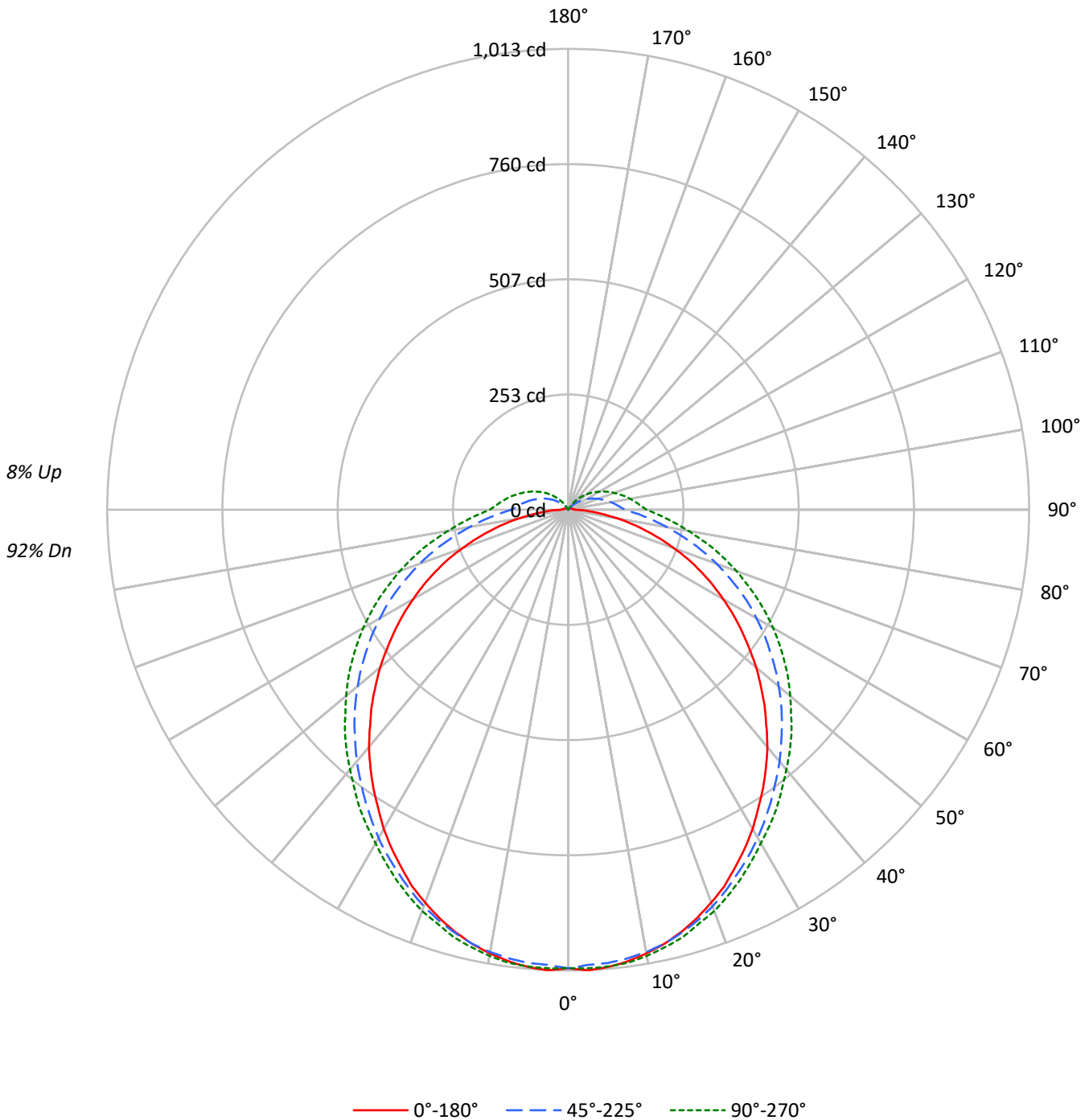
Lumens per Lamp: N/A
Luminaire Lumens: 3387.5 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 34.8
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: P242518

CATALOG NUMBER: S123DRP-S1000D935-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot





TEST NUMBER: P242518

CATALOG NUMBER: S123DRP-S1000D935-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	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	92
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	73
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	60
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	50
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	32
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12218	12218	12218
5°	12255	11888	11887
10°	12144	11593	11519
15°	11987	11262	11124
20°	11762	10889	10694
25°	11486	10463	10246
30°	11202	10080	9792
35°	10884	9675	9427
40°	10581	9306	9038
45°	10245	8950	8723
50°	9912	8598	8378
55°	9544	8236	8063
60°	9188	7867	7741
65°	8820	7474	7361
70°	8265	7034	6969
75°	7570	6529	6567
80°	6763	6024	6107
85°	6006	5644	5804

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10245 cd/sqm



TEST NUMBER: P242518

CATALOG NUMBER: S123DRP-S1000D935-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	2.8
10°-20°	272.6	8.0
20°-30°	407.6	12.0
30°-40°	486.7	14.4
40°-50°	509.2	15.0
50°-60°	477.8	14.1
60°-70°	399.1	11.8
70°-80°	285.4	8.4
80°-90°	169.8	5.0
90°-100°	106.7	3.2
100°-110°	78.4	2.3
110°-120°	52.4	1.5
120°-130°	29.9	0.9
130°-140°	13.4	0.4
140°-150°	2.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	775.8	22.9
0°-40°	1262.5	37.3
0°-60°	2249.5	66.4
0°-90°	3103.9	91.6
90°-120°	237.5	7.0
90°-150°	283.6	8.4
90°-180°	284.0	8.4
0°-180°	3387.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1008	1008	1008	1008	1008	
5°	1009	1007	1000	1009	1008	96
15°	961	964	963	974	973	271
25°	867	878	882	896	896	400
35°	747	764	778	795	799	467
45°	610	637	664	685	694	471
55°	466	502	541	571	580	417
65°	322	364	413	446	457	318
75°	175	226	281	317	330	186
85°	54	109	167	204	215	55
90°	14	68	124	161	172	10
95°	12	55	109	143	154	9
105°	9	35	82	113	123	9
115°	6	19	58	84	93	6
125°	3	3	35	58	66	3
135°	2	1	13	33	38	2
145°	1	0	0	9	13	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: P242518

CATALOG NUMBER: S123DRP-S1000D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1008.0	1008.0	1008.0	1008.0	1008.0
2.5°	1013.4	1010.1	1001.4	1010.1	1009.1
5°	1009.1	1006.9	1000.3	1009.1	1008.0
7.5°	1001.4	1001.4	994.8	1005.8	1004.7
10°	990.4	992.6	987.1	998.1	995.9
12.5°	977.2	980.5	977.2	987.1	984.9
15°	960.7	964.0	962.9	973.9	972.8
17.5°	941.0	947.6	946.5	956.3	954.2
20°	919.0	925.6	927.8	937.7	938.8
22.5°	896.0	902.5	905.8	919.0	917.9
25°	867.4	878.4	881.7	896.0	896.0
27.5°	840.0	852.0	858.6	870.7	871.8
30°	810.3	824.6	833.4	846.5	846.5
32.5°	777.4	793.8	805.9	820.2	823.5
35°	746.6	764.2	778.5	794.9	799.3
37.5°	713.7	733.5	749.9	768.6	771.9
40°	680.8	700.5	722.5	741.1	745.5
42.5°	644.5	669.8	692.8	713.7	720.3
45°	610.5	636.8	664.3	685.1	693.9
47.5°	574.2	603.9	634.6	657.7	664.3
50°	539.1	569.9	603.9	629.1	636.8
52.5°	501.8	534.7	573.1	599.5	609.4
55°	465.5	501.8	541.3	571.0	579.7
57.5°	430.4	467.7	510.6	540.2	550.1
60°	393.1	432.6	477.6	508.4	520.4
62.5°	357.9	398.6	446.9	477.6	488.6
65°	321.7	364.5	412.8	445.8	456.8
67.5°	285.5	330.5	378.8	415.0	423.8
70°	247.0	294.3	347.0	382.1	393.1
72.5°	211.9	259.1	314.0	350.3	361.2
75°	174.6	226.2	281.1	317.3	330.5
77.5°	142.7	194.3	249.2	287.7	297.6
80°	108.7	162.5	219.6	256.9	267.9
82.5°	79.1	134.0	192.1	229.5	240.5
85°	53.8	108.7	166.9	204.2	215.2
87.5°	32.9	87.8	143.8	181.2	192.1
90°	14.3	68.1	124.1	161.4	172.4
92.5°	13.2	60.4	115.3	151.5	161.4
95°	12.1	54.9	108.7	142.7	153.7
97.5°	11.0	50.5	102.1	135.1	146.0
100°	9.9	45.0	95.5	127.4	138.3
102.5°	8.8	39.5	88.9	119.7	130.7
105°	8.8	35.1	82.3	113.1	123.0
107.5°	7.7	30.7	75.8	105.4	115.3
110°	6.6	26.4	70.3	98.8	107.6



TEST NUMBER: P242518

CATALOG NUMBER: S123DRP-S1000D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.6	22.0	63.7	91.1	101.0
115°	5.5	18.7	58.2	84.5	93.3
117.5°	5.5	14.3	51.6	78.0	86.7
120°	4.4	9.9	46.1	71.4	79.1
122.5°	4.4	6.6	40.6	64.8	72.5
125°	3.3	3.3	35.1	58.2	65.9
127.5°	3.3	2.2	29.6	51.6	59.3
130°	3.3	2.2	24.2	45.0	51.6
132.5°	2.2	2.2	18.7	38.4	46.1
135°	2.2	1.1	13.2	32.9	38.4
137.5°	2.2	1.1	8.8	26.4	31.8
140°	1.1	1.1	4.4	20.9	26.4
142.5°	1.1	0.0	0.0	14.3	19.8
145°	1.1	0.0	0.0	8.8	13.2
147.5°	0.0	0.0	0.0	3.3	7.7
150°	0.0	0.0	0.0	0.0	2.2
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: P242518
 CATALOG NUMBER: S123DRP-S1000D935-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	17.75	19.25	18.24	19.73	20.25	19.74	21.25	20.23	21.73	22.25
	3H	19.30	20.68	19.81	21.17	21.72	22.12	23.49	22.62	23.99	24.54
	4H	19.83	21.13	20.35	21.63	22.20	23.24	24.54	23.76	25.04	25.61
	6H	20.17	21.38	20.71	21.90	22.49	24.34	25.55	24.88	26.07	26.66
	8H	20.26	21.42	20.81	21.96	22.55	24.90	26.06	25.45	26.60	27.19
	12H	20.31	21.42	20.86	21.96	22.58	25.50	26.62	26.06	27.15	27.78
4H	2H	18.65	19.95	19.18	20.46	21.03	20.20	21.50	20.73	22.01	22.58
	3H	20.46	21.56	20.99	22.11	22.71	22.80	23.90	23.33	24.45	25.05
	4H	21.12	22.13	21.68	22.69	23.32	24.07	25.08	24.62	25.64	26.26
	6H	21.59	22.49	22.17	23.07	23.71	25.35	26.24	25.92	26.83	27.47
	8H	21.73	22.57	22.31	23.16	23.81	26.00	26.84	26.58	27.42	28.07
	12H	21.82	22.58	22.42	23.19	23.85	26.72	27.48	27.32	28.09	28.75
8H	4H	21.75	22.60	22.34	23.18	23.83	24.29	25.13	24.87	25.72	26.37
	6H	22.41	23.12	23.02	23.75	24.40	25.73	26.44	26.34	27.07	27.72
	8H	22.64	23.29	23.27	23.92	24.59	26.51	27.15	27.13	27.79	28.45
	12H	22.82	23.39	23.44	24.01	24.75	27.39	27.96	28.02	28.59	29.32
12H	4H	21.91	22.67	22.51	23.28	23.94	24.30	25.06	24.90	25.68	26.33
	6H	22.65	23.29	23.28	23.93	24.60	25.77	26.41	26.40	27.05	27.72
	8H	22.98	23.55	23.60	24.17	24.91	26.61	27.19	27.24	27.81	28.55