

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: P242544

Luminaire Tested: S123RDRP-S340D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S340D930-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

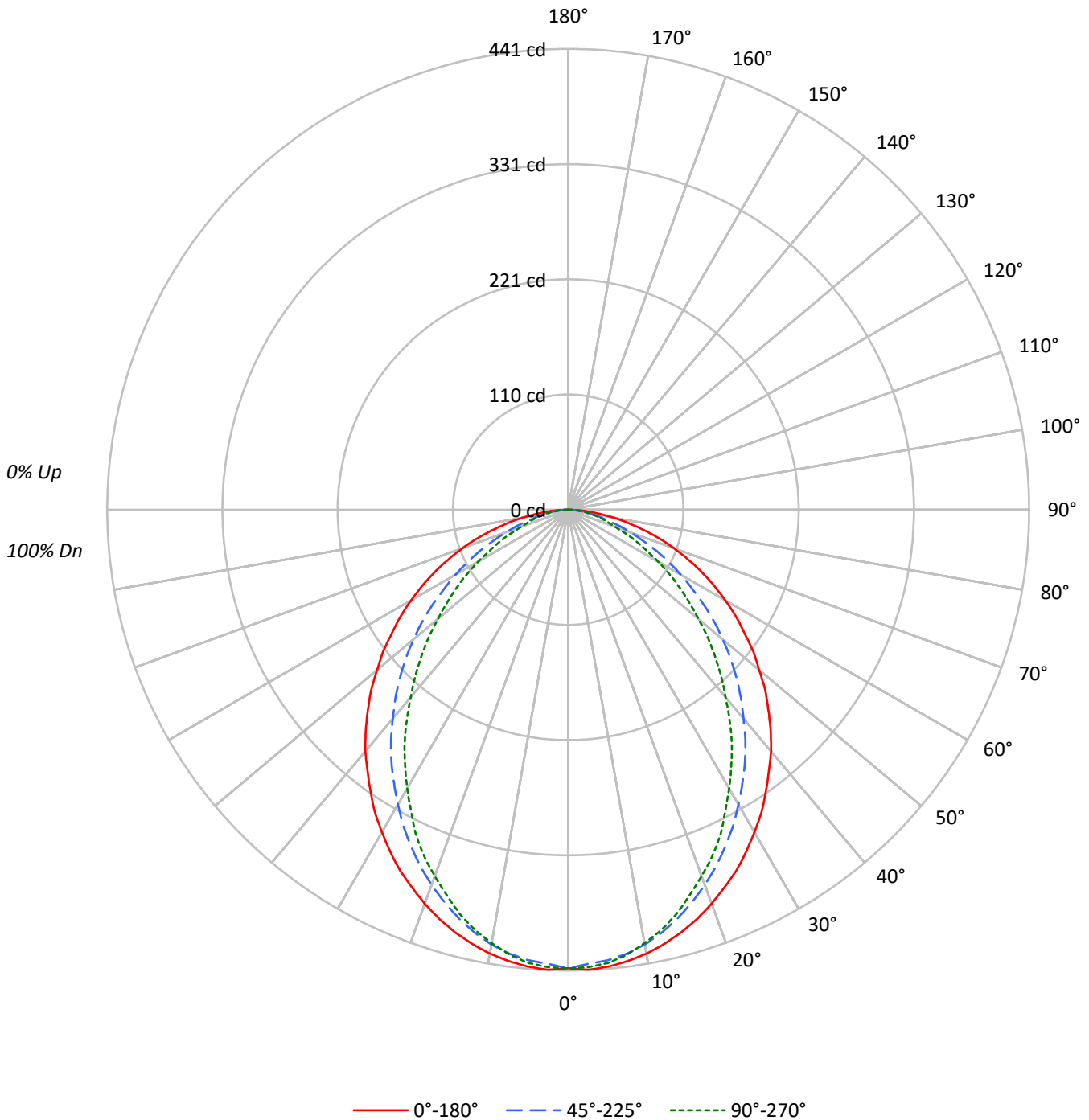
Lumens per Lamp: N/A
Luminaire Lumens: 991.6 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): 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: P242544

CATALOG NUMBER: S123RDRP-S340D930-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P242544

CATALOG NUMBER: S123RDRP-S340D930-X4F0-XX-UDD-F-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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5320	5320	5320
5°	5340	5267	5298
10°	5310	5200	5183
15°	5253	5079	5026
20°	5175	4927	4813
25°	5094	4756	4603
30°	4987	4559	4309
35°	4877	4362	4040
40°	4777	4128	3706
45°	4644	3900	3404
50°	4497	3638	3068
55°	4349	3341	2754
60°	4211	3021	2407
65°	4033	2676	2062
70°	3810	2247	1666
75°	3484	1766	1569
80°	3106	1564	1438
85°	2629	1391	1293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4644 cd/sqm



TEST NUMBER: P242544

CATALOG NUMBER: S123RDRP-S340D930-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	4.2
10°-20°	114.8	11.6
20°-30°	165.3	16.7
30°-40°	186.1	18.8
40°-50°	178.0	18.0
50°-60°	145.7	14.7
60°-70°	98.2	9.9
70°-80°	49.3	5.0
80°-90°	12.9	1.3
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°	321.3	32.4
0°-40°	507.4	51.2
0°-60°	831.2	83.8
0°-90°	991.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	991.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	439	439	439	439	439	
5°	439	437	433	436	435	42
15°	419	415	405	403	400	118
25°	381	372	356	348	344	175
35°	330	317	295	279	273	206
45°	271	255	228	207	199	209
55°	206	188	158	137	130	185
65°	141	121	93	76	72	139
75°	74	57	38	34	34	79
85°	19	11	10	9	9	22
90°	0	0	0	0	0	



TEST NUMBER: P242544

CATALOG NUMBER: S123RDRP-S340D930-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	438.9	438.9	438.9	438.9	438.9
2.5°	440.7	439.3	435.0	438.9	438.2
5°	438.9	437.1	432.9	436.1	435.4
7.5°	435.7	433.9	428.6	430.7	429.7
10°	431.4	429.0	422.5	422.9	421.1
12.5°	425.4	422.5	414.4	414.0	411.9
15°	418.6	414.7	404.7	403.0	400.5
17.5°	410.4	406.2	393.7	390.2	386.6
20°	401.2	395.5	382.0	377.3	373.1
22.5°	390.9	384.1	369.5	363.5	359.5
25°	380.9	372.0	355.6	348.1	344.2
27.5°	368.8	359.2	341.4	331.4	325.4
30°	356.3	345.7	325.7	313.6	307.9
32.5°	343.9	331.4	310.1	296.5	290.5
35°	329.6	316.8	294.8	279.4	273.0
37.5°	315.4	301.5	278.4	261.3	253.5
40°	301.9	286.2	260.9	242.4	234.2
42.5°	286.6	270.9	244.6	223.9	216.8
45°	270.9	254.9	227.5	207.2	198.6
47.5°	255.6	237.8	210.7	188.7	181.2
50°	238.5	221.8	192.9	170.9	162.7
52.5°	223.2	204.7	176.2	153.1	146.0
55°	205.8	188.3	158.1	137.4	130.3
57.5°	190.1	171.2	140.6	121.0	115.0
60°	173.7	154.1	124.6	105.4	99.3
62.5°	157.3	137.8	108.2	90.4	84.0
65°	140.6	121.0	93.3	75.8	71.9
67.5°	123.9	103.9	76.9	63.7	59.4
70°	107.5	88.3	63.4	50.9	47.0
72.5°	91.1	72.3	50.2	40.6	39.5
75°	74.4	57.3	37.7	34.2	33.5
77.5°	59.1	43.4	29.5	27.4	26.7
80°	44.5	29.9	22.4	21.4	20.6
82.5°	30.6	18.5	16.0	15.0	15.0
85°	18.9	11.0	10.0	9.3	9.3
87.5°	8.5	4.6	4.6	4.3	3.9
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242544
 CATALOG NUMBER: S123RDRP-S340D930-X4F0-XX-UDD-F-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	17.25	18.81	17.62	19.12	19.44	14.63	16.18	14.99	16.49	16.81
	3H	19.03	20.43	19.41	20.76	21.12	15.74	17.13	16.11	17.46	17.82
	4H	19.69	21.00	20.09	21.35	21.73	16.13	17.44	16.53	17.79	18.17
	6H	20.17	21.39	20.59	21.75	22.14	16.45	17.66	16.86	18.03	18.42
	8H	20.32	21.48	20.75	21.87	22.27	16.56	17.72	16.99	18.11	18.51
	12H	20.43	21.53	20.86	21.92	22.34	16.64	17.74	17.07	18.13	18.55
4H	2H	17.51	18.83	17.91	19.18	19.55	15.34	16.65	15.74	17.00	17.38
	3H	19.48	20.57	19.89	20.97	21.37	16.62	17.71	17.03	18.11	18.51
	4H	20.25	21.23	20.68	21.65	22.08	17.10	18.08	17.53	18.49	18.93
	6H	20.84	21.70	21.30	22.14	22.60	17.52	18.37	17.97	18.81	19.27
	8H	21.04	21.84	21.50	22.28	22.75	17.66	18.46	18.12	18.91	19.37
	12H	21.18	21.90	21.66	22.38	22.85	17.77	18.49	18.25	18.97	19.44
8H	4H	20.30	21.10	20.77	21.55	22.01	17.42	18.22	17.88	18.66	19.13
	6H	20.96	21.63	21.46	22.12	22.59	17.93	18.59	18.43	19.08	19.56
	8H	21.20	21.79	21.71	22.30	22.79	18.14	18.73	18.65	19.24	19.73
	12H	21.40	21.92	21.91	22.42	22.98	18.31	18.83	18.82	19.33	19.89
12H	4H	20.29	21.01	20.77	21.49	21.96	17.46	18.18	17.94	18.65	19.13
	6H	20.95	21.55	21.46	22.05	22.54	17.99	18.59	18.50	19.10	19.58
	8H	21.22	21.75	21.73	22.24	22.80	18.25	18.77	18.76	19.27	19.83