

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: P242444

Luminaire Tested: S123DRP-S1000D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242444
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S1000D930-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

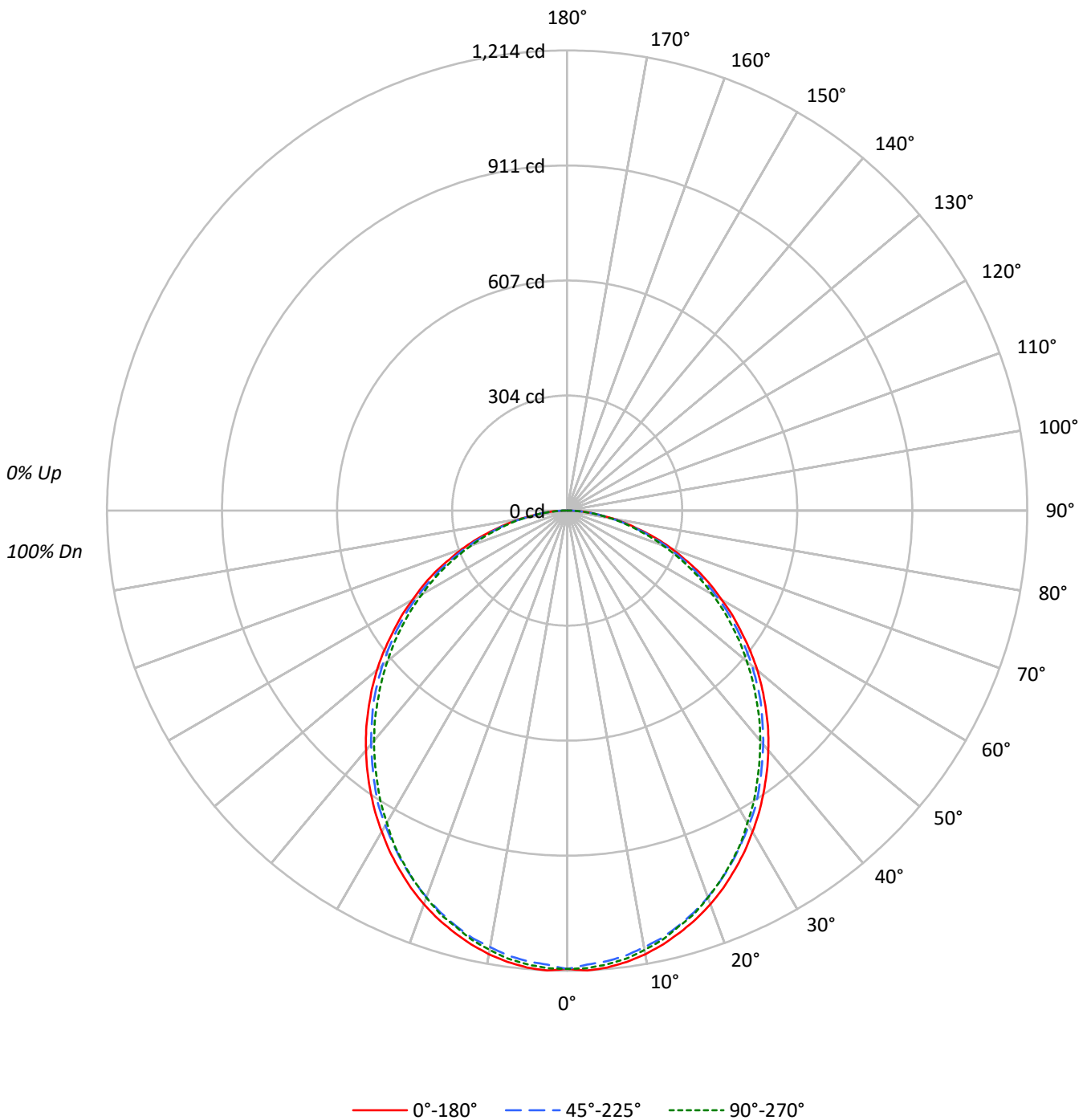
Lumens per Lamp: N/A
Luminaire Lumens: 3147.0 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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: P242444

CATALOG NUMBER: S123DRP-S1000D930-X4F0-XX-UDD-F-W

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	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°	14657	14657	14657
5°	14725	14523	14624
10°	14627	14397	14486
15°	14456	14234	14260
20°	14256	14002	14015
25°	13988	13725	13697
30°	13694	13417	13315
35°	13384	13093	12924
40°	13062	12733	12537
45°	12707	12404	12102
50°	12352	11999	11665
55°	11887	11579	11228
60°	11418	11091	10737
65°	11005	10558	10228
70°	10391	9948	9505
75°	9493	9156	8762
80°	8565	8202	8125
85°	7524	7232	6940

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12707 cd/sqm



TEST NUMBER: P242444

CATALOG NUMBER: S123DRP-S1000D930-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.0	3.6
10°-20°	321.9	10.2
20°-30°	475.4	15.1
30°-40°	555.2	17.6
40°-50°	558.1	17.7
50°-60°	490.3	15.6
60°-70°	365.2	11.6
70°-80°	207.8	6.6
80°-90°	59.1	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°	911.3	29.0
0°-40°	1466.5	46.6
0°-60°	2514.9	79.9
0°-90°	3147.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3147.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1210	1205	1194	1204	1202	115
15°	1152	1148	1134	1143	1136	325
25°	1046	1040	1026	1027	1024	482
35°	904	898	885	879	873	566
45°	741	737	724	711	706	572
55°	562	561	548	536	531	504
65°	384	378	368	360	357	379
75°	203	199	196	190	187	217
85°	54	52	52	50	50	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1209.2	1209.2	1209.2	1209.2	1209.2
2.5°	1214.4	1210.2	1198.8	1209.2	1208.1
5°	1210.2	1205.0	1193.6	1204.0	1201.9
7.5°	1200.9	1195.7	1184.2	1193.6	1192.5
10°	1188.4	1183.2	1169.7	1179.0	1176.9
12.5°	1171.7	1167.6	1155.1	1161.4	1160.3
15°	1152.0	1147.8	1134.3	1142.6	1136.4
17.5°	1130.2	1125.0	1111.4	1117.7	1115.6
20°	1105.2	1099.0	1085.5	1089.6	1086.5
22.5°	1077.1	1070.9	1057.4	1060.5	1056.3
25°	1045.9	1039.7	1026.2	1027.2	1024.1
27.5°	1013.7	1007.5	992.9	994.0	990.8
30°	978.4	973.2	958.6	958.6	951.3
32.5°	943.0	935.7	925.3	918.1	914.9
35°	904.5	898.3	884.8	878.6	873.4
37.5°	866.1	857.8	844.2	837.0	833.8
40°	825.5	819.3	804.7	796.4	792.3
42.5°	785.0	777.7	763.1	754.8	750.7
45°	741.3	737.2	723.6	711.2	706.0
47.5°	698.7	692.4	680.0	667.5	663.3
50°	655.0	649.8	636.3	624.9	618.6
52.5°	609.3	606.1	591.6	582.2	576.0
55°	562.5	561.4	547.9	536.5	531.3
57.5°	518.8	514.7	504.3	493.9	487.6
60°	471.0	469.9	457.5	448.1	442.9
62.5°	428.4	425.2	412.8	403.4	400.3
65°	383.7	378.5	368.1	359.7	356.6
67.5°	335.8	331.7	323.3	316.1	311.9
70°	293.2	287.0	280.7	273.4	268.2
72.5°	248.5	244.3	237.1	230.8	228.7
75°	202.7	198.6	195.5	190.3	187.1
77.5°	162.2	160.1	156.0	151.8	151.8
80°	122.7	119.6	117.5	116.4	116.4
82.5°	84.2	84.2	84.2	82.1	81.1
85°	54.1	52.0	52.0	49.9	49.9
87.5°	27.0	23.9	22.9	21.8	21.8
90°	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	20.69	22.31	21.05	22.62	22.93	20.37	21.99	20.74	22.30	22.62
	3H	22.46	23.92	22.83	24.25	24.61	22.09	23.55	22.46	23.88	24.24
	4H	23.11	24.49	23.51	24.84	25.21	22.72	24.10	23.12	24.45	24.83
	6H	23.60	24.88	24.01	25.24	25.63	23.21	24.49	23.62	24.85	25.24
	8H	23.76	24.97	24.18	25.36	25.76	23.37	24.59	23.79	24.98	25.38
	12H	23.86	25.03	24.29	25.41	25.84	23.48	24.64	23.91	25.03	25.45
4H	2H	21.27	22.64	21.66	22.99	23.37	21.02	22.39	21.41	22.74	23.12
	3H	23.26	24.41	23.67	24.81	25.21	22.95	24.11	23.36	24.50	24.90
	4H	24.04	25.09	24.47	25.50	25.94	23.71	24.76	24.15	25.17	25.61
	6H	24.66	25.57	25.12	26.01	26.47	24.33	25.24	24.78	25.68	26.13
	8H	24.86	25.72	25.32	26.16	26.62	24.53	25.39	24.99	25.83	26.29
	12H	25.01	25.78	25.49	26.26	26.73	24.68	25.45	25.16	25.93	26.39
8H	4H	24.33	25.18	24.79	25.62	26.09	24.04	24.89	24.50	25.33	25.80
	6H	25.06	25.77	25.56	26.26	26.74	24.77	25.48	25.26	25.97	26.44
	8H	25.34	25.98	25.85	26.48	26.97	25.05	25.69	25.56	26.19	26.68
	12H	25.57	26.13	26.07	26.62	27.18	25.27	25.84	25.78	26.33	26.89
12H	4H	24.36	25.12	24.84	25.60	26.07	24.07	24.84	24.55	25.32	25.78
	6H	25.11	25.75	25.62	26.26	26.75	24.83	25.47	25.34	25.98	26.46
	8H	25.45	26.01	25.95	26.50	27.06	25.17	25.74	25.68	26.23	26.79