

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: P243304

Luminaire Tested: S123DRP-H1000D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-49)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H1000D930-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

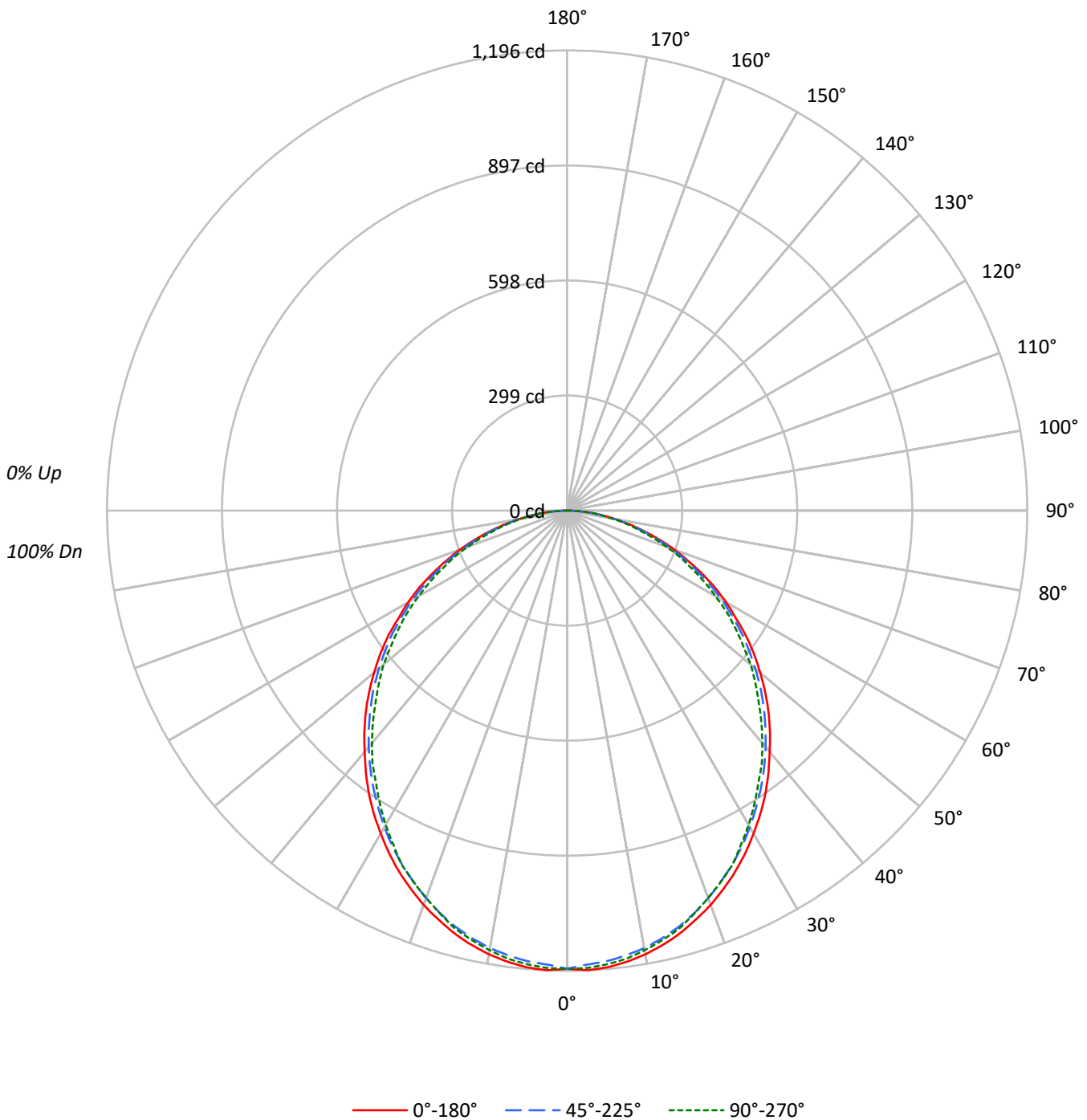
Lumens per Lamp: N/A
Luminaire Lumens: 3150.2 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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	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	94	97	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14434	14434	14434
5°	14501	14310	14405
10°	14415	14210	14282
15°	14265	14056	14117
20°	14069	13828	13815
25°	13838	13576	13590
30°	13561	13301	13204
35°	13292	13001	12813
40°	12954	12692	12489
45°	12689	12385	12066
50°	12348	12033	11737
55°	11991	11680	11285
60°	11566	11256	10805
65°	11065	10727	10276
70°	10508	10161	9742
75°	9746	9470	8964
80°	8774	8565	8293
85°	8192	7788	7510

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12689 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.3	3.6
10°-20°	317.7	10.1
20°-30°	470.4	14.9
30°-40°	551.6	17.5
40°-50°	557.7	17.7
50°-60°	493.2	15.7
60°-70°	370.4	11.8
70°-80°	213.5	6.8
80°-90°	63.3	2.0
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°	900.4	28.6
0°-40°	1452.0	46.1
0°-60°	2502.9	79.5
0°-90°	3150.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3150.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1191	1191	1191	1191	1191	
5°	1192	1187	1176	1186	1184	113
15°	1137	1131	1120	1128	1125	320
25°	1035	1027	1015	1020	1016	476
35°	898	890	879	876	866	561
45°	740	734	722	713	704	570
55°	567	564	553	542	534	507
65°	386	383	374	364	358	382
75°	208	206	202	196	191	221
85°	59	58	56	55	54	66
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1190.8	1190.8	1190.8	1190.8	1190.8
2.5°	1195.7	1191.8	1181.0	1191.8	1189.8
5°	1191.8	1186.9	1176.1	1185.9	1183.9
7.5°	1183.0	1178.0	1166.3	1177.1	1175.1
10°	1171.2	1166.3	1154.5	1163.3	1160.4
12.5°	1155.5	1150.6	1138.8	1145.6	1143.7
15°	1136.8	1130.9	1120.1	1128.0	1125.0
17.5°	1114.2	1109.3	1097.5	1107.4	1098.5
20°	1090.7	1085.8	1072.0	1080.9	1071.0
22.5°	1063.2	1057.3	1043.5	1049.4	1044.5
25°	1034.7	1026.9	1015.1	1020.0	1016.1
27.5°	1003.3	995.4	983.7	985.6	978.8
30°	968.9	962.1	950.3	952.3	943.4
32.5°	934.6	928.7	914.0	914.0	905.1
35°	898.3	890.4	878.6	875.7	865.9
37.5°	859.0	852.1	841.3	836.4	830.5
40°	818.7	814.8	802.1	796.2	789.3
42.5°	780.5	773.6	762.8	754.9	747.1
45°	740.2	734.3	722.5	712.7	703.9
47.5°	698.0	693.1	681.3	670.5	663.6
50°	654.8	650.9	638.1	626.3	622.4
52.5°	612.6	607.7	594.9	584.1	576.3
55°	567.4	563.5	552.7	541.9	534.0
57.5°	519.3	519.3	507.5	497.7	491.8
60°	477.1	472.2	464.3	453.5	445.7
62.5°	432.9	430.0	419.2	408.4	402.5
65°	385.8	382.9	374.0	364.2	358.3
67.5°	339.7	338.7	330.8	323.0	319.1
70°	296.5	294.5	286.7	278.8	274.9
72.5°	252.3	250.3	243.5	236.6	231.7
75°	208.1	206.2	202.2	196.3	191.4
77.5°	164.9	164.9	160.0	158.1	156.1
80°	125.7	124.7	122.7	120.7	118.8
82.5°	90.3	89.3	87.4	86.4	86.4
85°	58.9	57.9	56.0	55.0	54.0
87.5°	30.4	28.5	27.5	25.5	24.5
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	20.73	22.35	21.09	22.67	22.98	20.42	22.04	20.78	22.35	22.67
	3H	22.52	23.99	22.90	24.32	24.68	22.17	23.64	22.55	23.97	24.33
	4H	23.20	24.59	23.60	24.93	25.31	22.82	24.20	23.22	24.55	24.93
	6H	23.70	24.98	24.11	25.35	25.74	23.32	24.60	23.73	24.97	25.36
	8H	23.87	25.09	24.29	25.48	25.88	23.49	24.72	23.92	25.11	25.51
	12H	23.99	25.16	24.42	25.55	25.97	23.61	24.79	24.04	25.17	25.60
4H	2H	21.32	22.70	21.71	23.05	23.42	21.07	22.46	21.47	22.80	23.18
	3H	23.34	24.50	23.75	24.90	25.30	23.05	24.21	23.46	24.60	25.00
	4H	24.15	25.20	24.58	25.62	26.05	23.82	24.88	24.26	25.29	25.72
	6H	24.78	25.70	25.24	26.14	26.60	24.45	25.37	24.91	25.81	26.27
	8H	25.00	25.86	25.46	26.30	26.77	24.68	25.54	25.14	25.98	26.44
	12H	25.17	25.95	25.65	26.42	26.89	24.84	25.62	25.32	26.09	26.56
8H	4H	24.45	25.31	24.91	25.75	26.21	24.16	25.02	24.62	25.46	25.93
	6H	25.20	25.92	25.69	26.40	26.88	24.91	25.63	25.41	26.12	26.59
	8H	25.50	26.14	26.01	26.65	27.13	25.21	25.86	25.72	26.36	26.85
	12H	25.76	26.32	26.26	26.81	27.37	25.46	26.03	25.97	26.52	27.08
12H	4H	24.48	25.25	24.96	25.73	26.20	24.20	24.97	24.68	25.45	25.92
	6H	25.26	25.90	25.76	26.41	26.89	24.98	25.62	25.49	26.13	26.62
	8H	25.61	26.18	26.12	26.67	27.23	25.34	25.91	25.85	26.40	26.96