

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: P242328

Luminaire Tested: S122DRP-S1005D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242328
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S1005D830-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

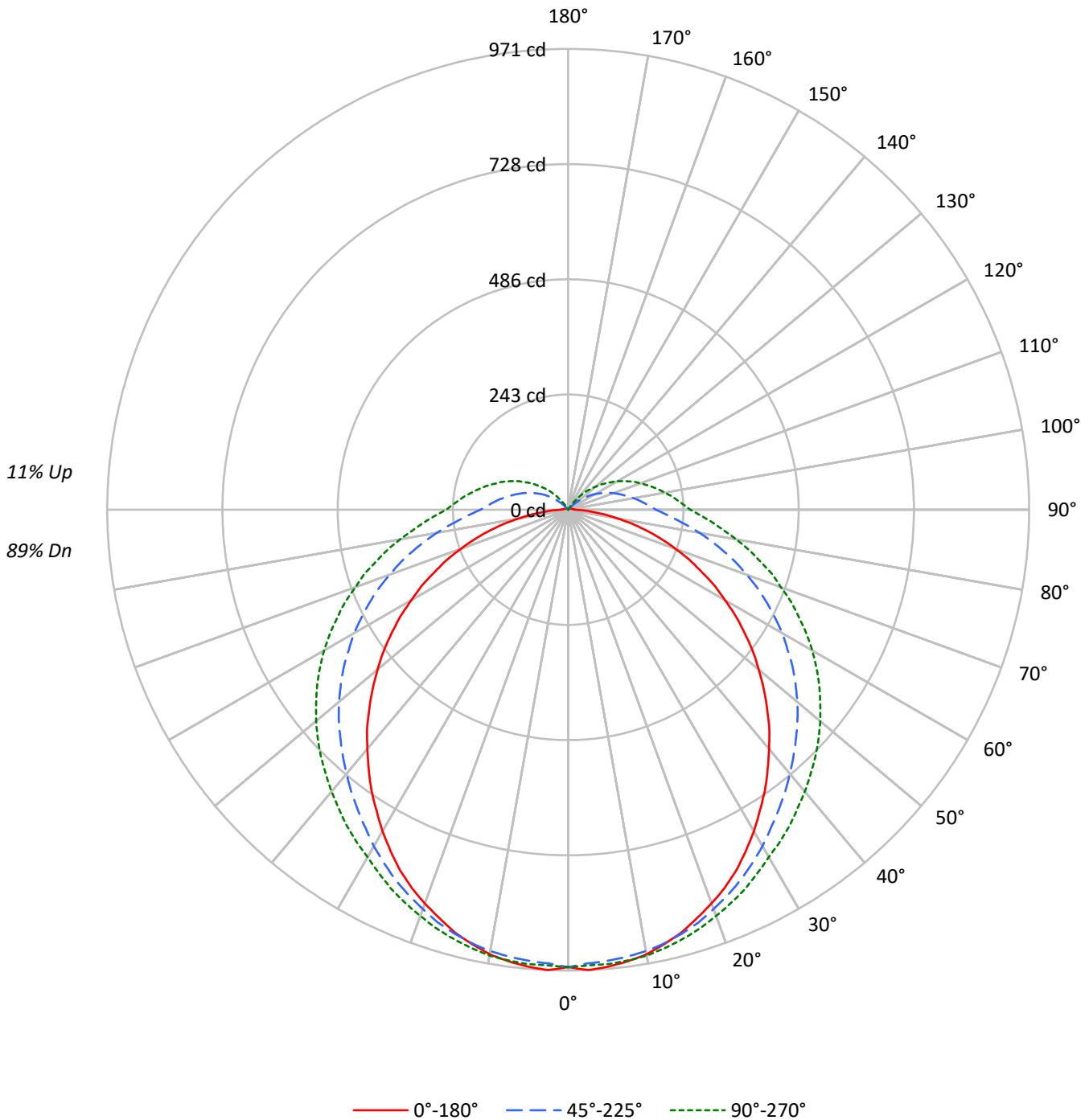
Lumens per Lamp: N/A
Luminaire Lumens: 3677.8 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 41.1
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: P242328

CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-D-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	0
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72	69
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42	39
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31	29
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18360	18360	18360
5°	18449	17597	17502
10°	18330	17007	16765
15°	18077	16395	16005
20°	17758	15747	15283
25°	17441	15128	14629
30°	16995	14496	13977
35°	16544	13886	13502
40°	16071	13361	13030
45°	15619	12886	12620
50°	15134	12449	12215
55°	14628	11983	11802
60°	14008	11500	11367
65°	13360	10941	10864
70°	12636	10339	10324
75°	11704	9742	9813
80°	10246	9119	9286
85°	8824	8539	8836

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15619 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	2.5
10°-20°	262.1	7.1
20°-30°	397.1	10.8
30°-40°	483.5	13.1
40°-50°	520.3	14.1
50°-60°	505.2	13.7
60°-70°	441.2	12.0
70°-80°	339.6	9.2
80°-90°	227.4	6.2
90°-100°	156.9	4.3
100°-110°	114.6	3.1
110°-120°	75.7	2.1
120°-130°	42.2	1.1
130°-140°	17.7	0.5
140°-150°	3.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	750.5	20.4
0°-40°	1234.1	33.6
0°-60°	2259.6	61.4
0°-90°	3267.8	88.9
90°-120°	347.2	9.4
90°-150°	410.0	11.1
90°-180°	410.0	11.1
0°-180°	3677.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	964	964	964	964	964	
5°	967	962	954	962	961	92
15°	922	925	925	937	936	260
25°	838	848	860	877	882	385
35°	722	746	772	803	813	451
45°	592	630	679	722	736	457
55°	454	504	577	627	645	406
65°	310	379	461	518	536	308
75°	172	250	340	400	418	182
85°	50	137	226	285	304	53
90°	14	95	184	240	257	10
95°	11	77	161	214	230	9
105°	7	48	120	169	184	8
115°	6	21	84	126	141	5
125°	3	3	48	85	98	3
135°	1	1	15	45	56	2
145°	0	0	0	8	15	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	963.9	963.9	963.9	963.9	963.9
2.5°	970.9	966.7	956.9	963.9	961.1
5°	966.7	962.5	954.1	962.5	961.1
7.5°	959.7	956.9	949.9	959.7	958.3
10°	951.3	948.5	944.3	955.5	954.1
12.5°	937.3	938.7	935.9	947.1	945.7
15°	922.0	924.8	924.8	937.3	935.9
17.5°	902.4	908.0	912.2	924.8	924.8
20°	882.9	889.8	895.4	910.8	910.8
22.5°	861.9	870.3	878.7	894.0	896.8
25°	838.2	847.9	860.5	877.3	881.5
27.5°	810.2	825.6	839.6	860.5	863.3
30°	782.3	800.4	818.6	840.9	845.1
32.5°	751.5	772.5	794.8	821.4	829.8
35°	722.2	746.0	772.5	803.2	813.0
37.5°	690.1	716.6	750.1	783.7	793.5
40°	658.0	688.7	726.4	762.7	775.3
42.5°	627.2	658.0	702.7	743.2	755.7
45°	592.3	630.0	678.9	722.2	736.2
47.5°	558.8	599.3	655.2	699.9	715.2
50°	523.8	567.2	630.0	677.5	692.9
52.5°	490.3	536.4	603.5	652.4	669.1
55°	454.0	504.3	576.9	627.2	645.4
57.5°	419.1	475.0	547.6	602.1	620.2
60°	381.4	441.4	521.1	574.1	593.7
62.5°	347.8	410.7	490.3	547.6	565.8
65°	310.1	378.6	461.0	518.3	536.4
67.5°	276.6	347.8	431.6	488.9	508.5
70°	240.3	312.9	399.5	459.6	476.4
72.5°	206.7	282.2	370.2	428.9	449.8
75°	171.8	250.0	339.5	399.5	417.7
77.5°	138.3	219.3	310.1	370.2	389.7
80°	104.8	190.0	280.8	339.5	359.0
82.5°	76.8	160.6	252.8	311.5	329.7
85°	50.3	136.9	226.3	285.0	304.5
87.5°	30.7	114.5	204.0	261.2	279.4
90°	14.0	95.0	184.4	240.3	257.0
92.5°	12.6	86.6	171.8	226.3	243.1
95°	11.2	76.8	160.6	213.7	230.5
97.5°	9.8	69.8	150.9	202.6	219.3
100°	9.8	61.5	139.7	191.4	206.7
102.5°	8.4	54.5	129.9	180.2	195.6
105°	7.0	47.5	120.1	169.0	184.4
107.5°	7.0	40.5	110.4	157.9	173.2
110°	5.6	33.5	102.0	146.7	162.0



TEST NUMBER: P242328

CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.6	27.9	92.2	136.9	152.3
115°	5.6	21.0	83.8	125.7	141.1
117.5°	4.2	15.4	74.0	115.9	129.9
120°	4.2	9.8	65.7	104.8	120.1
122.5°	4.2	5.6	57.3	95.0	107.6
125°	2.8	2.8	47.5	85.2	97.8
127.5°	2.8	1.4	39.1	74.0	86.6
130°	2.8	1.4	30.7	64.3	75.4
132.5°	2.8	1.4	22.4	54.5	65.7
135°	1.4	1.4	15.4	44.7	55.9
137.5°	1.4	1.4	8.4	34.9	44.7
140°	1.4	0.0	2.8	25.1	33.5
142.5°	1.4	0.0	0.0	16.8	23.7
145°	0.0	0.0	0.0	8.4	15.4
147.5°	0.0	0.0	0.0	1.4	5.6
150°	0.0	0.0	0.0	0.0	0.0
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



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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	18.33	19.81	18.86	20.34	20.92	21.39	22.87	21.92	23.40	23.98
	3H	19.83	21.19	20.37	21.72	22.34	24.02	25.37	24.56	25.91	26.53
	4H	20.33	21.62	20.89	22.17	22.80	25.30	26.59	25.86	27.14	27.77
	6H	20.65	21.85	21.22	22.41	23.06	26.63	27.83	27.20	28.40	29.04
	8H	20.72	21.87	21.31	22.46	23.11	27.31	28.46	27.90	29.05	29.70
	12H	20.76	21.86	21.35	22.44	23.13	28.07	29.17	28.66	29.75	30.43
4H	2H	19.44	20.73	20.00	21.28	21.91	21.78	23.07	22.34	23.62	24.25
	3H	21.20	22.30	21.77	22.89	23.54	24.62	25.72	25.20	26.32	26.97
	4H	21.84	22.86	22.43	23.46	24.14	26.07	27.08	26.66	27.68	28.36
	6H	22.29	23.19	22.90	23.82	24.51	27.57	28.47	28.18	29.09	29.79
	8H	22.42	23.26	23.03	23.89	24.59	28.35	29.19	28.97	29.82	30.53
	12H	22.49	23.26	23.13	23.91	24.63	29.22	29.99	29.86	30.64	31.35
8H	4H	22.68	23.53	23.30	24.15	24.86	26.26	27.10	26.87	27.73	28.44
	6H	23.35	24.06	23.99	24.73	25.44	27.92	28.64	28.57	29.31	30.02
	8H	23.58	24.23	24.23	24.90	25.62	28.83	29.47	29.48	30.15	30.87
	12H	23.74	24.32	24.40	24.98	25.77	29.86	30.44	30.52	31.10	31.89
12H	4H	22.92	23.68	23.55	24.33	25.05	26.27	27.03	26.90	27.69	28.40
	6H	23.69	24.34	24.35	25.01	25.74	27.95	28.60	28.61	29.28	30.00
	8H	24.03	24.61	24.69	25.27	26.05	28.92	29.50	29.58	30.16	30.95