

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: P243188

Luminaire Tested: S122DRP-H1005D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243188
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H1005D830-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

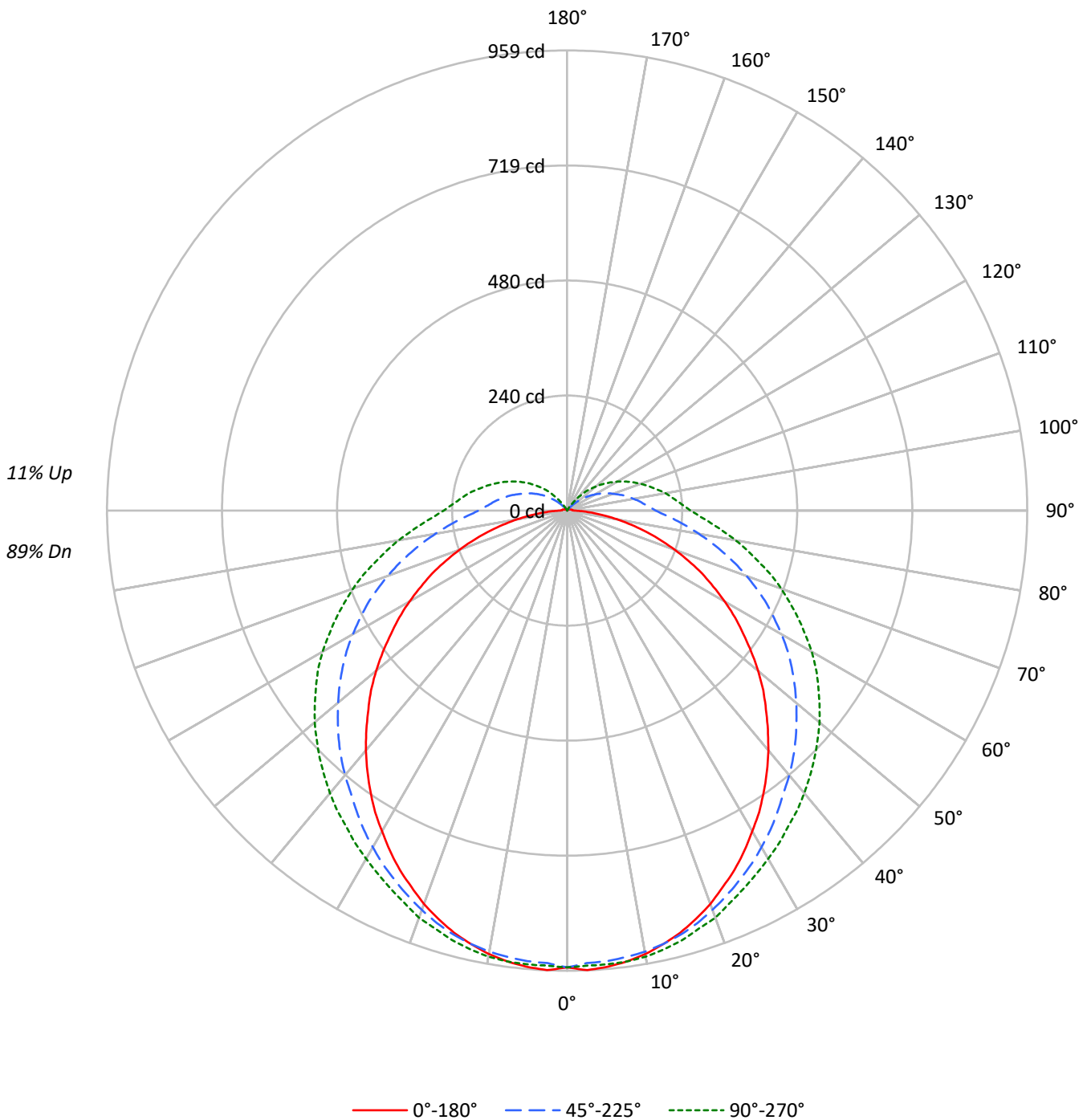
Lumens per Lamp: N/A
Luminaire Lumens: 3652.8 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 37.7
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

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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	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	84	81	82	79	76	77	74	72	69
2	93	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	41	39
5	71	57	48	41	68	55	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	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	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°	18132	18132	18132
5°	18218	17385	17287
10°	18087	16811	16587
15°	17858	16218	15848
20°	17546	15575	15151
25°	17188	14939	14433
30°	16763	14345	13857
35°	16370	13752	13343
40°	15932	13242	12924
45°	15453	12783	12500
50°	15015	12312	12107
55°	14437	11869	11685
60°	13927	11381	11271
65°	13365	10886	10766
70°	12547	10293	10285
75°	11650	9665	9717
80°	10373	9041	9224
85°	9070	8554	8735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15453 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.3	2.5
10°-20°	259.1	7.1
20°-30°	392.5	10.7
30°-40°	478.7	13.1
40°-50°	515.2	14.1
50°-60°	500.9	13.7
60°-70°	437.9	12.0
70°-80°	337.1	9.2
80°-90°	226.5	6.2
90°-100°	156.8	4.3
100°-110°	115.3	3.2
110°-120°	76.7	2.1
120°-130°	43.4	1.2
130°-140°	18.7	0.5
140°-150°	3.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	741.9	20.3
0°-40°	1220.7	33.4
0°-60°	2236.8	61.2
0°-90°	3238.4	88.7
90°-120°	348.9	9.6
90°-150°	414.4	11.3
90°-180°	414.0	11.3
0°-180°	3652.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	952	952	952	952	952	
5°	955	951	943	951	949	91
15°	911	915	915	927	927	257
25°	826	839	850	868	870	380
35°	715	738	765	794	803	447
45°	586	622	674	715	729	453
55°	448	501	571	623	639	402
65°	310	376	459	514	532	306
75°	171	249	337	396	414	180
85°	52	137	227	284	301	53
90°	15	96	184	240	257	10
95°	11	77	160	214	229	9
105°	8	48	122	170	184	8
115°	5	22	85	127	142	5
125°	4	3	50	86	99	3
135°	1	1	17	46	58	1
145°	1	0	0	11	16	1
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°	951.9	951.9	951.9	951.9	951.9
2.5°	958.6	954.6	944.0	951.9	949.3
5°	954.6	950.6	942.6	950.6	949.3
7.5°	947.9	945.3	938.7	949.3	947.9
10°	938.7	937.3	933.4	944.0	944.0
12.5°	925.4	926.7	925.4	937.3	936.0
15°	910.8	914.8	914.8	926.7	926.7
17.5°	892.3	898.9	901.5	914.8	913.5
20°	872.4	880.3	885.6	900.2	902.9
22.5°	848.5	860.4	868.4	884.3	885.6
25°	826.0	839.2	849.8	868.4	869.7
27.5°	799.5	815.4	831.3	849.8	853.8
30°	771.6	791.5	810.1	832.6	837.9
32.5°	745.1	765.0	788.8	812.7	822.0
35°	714.6	738.5	765.0	794.2	803.4
37.5°	684.1	709.3	741.1	775.6	787.5
40°	652.3	681.5	719.9	757.0	769.0
42.5°	619.1	651.0	697.4	735.8	749.1
45°	586.0	621.8	673.5	714.6	729.2
47.5°	554.2	592.6	648.3	694.7	708.0
50°	519.7	562.1	623.1	670.9	686.8
52.5°	483.9	531.6	597.9	647.0	662.9
55°	448.1	501.2	571.4	623.1	639.0
57.5°	415.0	470.7	544.9	596.6	615.2
60°	379.2	438.8	515.7	570.1	588.7
62.5°	343.4	408.3	486.6	542.3	559.5
65°	310.2	376.5	458.7	514.4	531.6
67.5°	273.1	343.4	428.2	486.6	502.5
70°	238.6	312.9	397.7	456.1	474.6
72.5°	204.2	279.7	367.2	425.6	445.5
75°	171.0	249.3	336.8	396.4	413.6
77.5°	136.6	218.8	307.6	367.2	384.5
80°	106.1	188.3	278.4	338.1	356.6
82.5°	75.6	160.4	251.9	310.2	327.5
85°	51.7	136.6	226.7	283.7	301.0
87.5°	30.5	114.0	202.8	259.9	277.1
90°	14.6	95.5	184.3	240.0	257.2
92.5°	11.9	86.2	171.0	225.4	242.6
95°	10.6	76.9	160.4	213.5	229.4
97.5°	10.6	70.3	151.1	202.8	218.8
100°	9.3	62.3	140.5	190.9	208.2
102.5°	9.3	54.4	131.3	180.3	196.2
105°	8.0	47.7	122.0	169.7	184.3
107.5°	6.6	41.1	111.4	159.1	173.7
110°	6.6	34.5	102.1	148.5	163.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.3	29.2	94.1	137.9	152.5
115°	5.3	22.5	84.9	127.3	141.9
117.5°	5.3	15.9	75.6	116.7	131.3
120°	4.0	10.6	67.6	107.4	120.6
122.5°	4.0	6.6	58.3	96.8	110.0
125°	4.0	2.7	50.4	86.2	99.4
127.5°	2.7	2.7	41.1	76.9	88.8
130°	2.7	1.3	33.1	66.3	78.2
132.5°	2.7	1.3	25.2	57.0	67.6
135°	1.3	1.3	17.2	46.4	58.3
137.5°	1.3	1.3	9.3	37.1	46.4
140°	1.3	0.0	4.0	27.8	35.8
142.5°	1.3	0.0	0.0	18.6	26.5
145°	1.3	0.0	0.0	10.6	15.9
147.5°	0.0	0.0	0.0	2.7	8.0
150°	0.0	0.0	0.0	0.0	1.3
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	18.29	19.76	18.81	20.30	20.88	21.35	22.83	21.88	23.36	23.94
	3H	19.79	21.14	20.33	21.68	22.30	23.98	25.33	24.52	25.87	26.49
	4H	20.29	21.57	20.85	22.13	22.76	25.26	26.54	25.82	27.10	27.73
	6H	20.61	21.80	21.18	22.37	23.02	26.59	27.78	27.16	28.35	29.00
	8H	20.68	21.83	21.27	22.42	23.08	27.27	28.42	27.86	29.01	29.66
	12H	20.72	21.82	21.32	22.41	23.09	28.02	29.13	28.62	29.71	30.39
4H	2H	19.40	20.69	19.97	21.24	21.88	21.74	23.03	22.30	23.58	24.21
	3H	21.16	22.26	21.74	22.86	23.51	24.59	25.69	25.16	26.28	26.94
	4H	21.81	22.82	22.41	23.43	24.11	26.03	27.04	26.62	27.64	28.32
	6H	22.26	23.16	22.88	23.79	24.48	27.53	28.43	28.14	29.05	29.75
	8H	22.39	23.23	23.01	23.86	24.57	28.31	29.15	28.93	29.78	30.49
	12H	22.47	23.23	23.11	23.89	24.60	29.18	29.95	29.82	30.60	31.32
8H	4H	22.65	23.49	23.27	24.12	24.83	26.22	27.06	26.84	27.69	28.40
	6H	23.31	24.03	23.96	24.70	25.41	27.88	28.60	28.53	29.27	29.98
	8H	23.55	24.19	24.21	24.87	25.60	28.79	29.44	29.45	30.11	30.84
	12H	23.72	24.29	24.38	24.96	25.75	29.82	30.40	30.49	31.07	31.86
12H	4H	22.88	23.65	23.52	24.30	25.02	26.23	26.99	26.87	27.65	28.36
	6H	23.66	24.31	24.32	24.98	25.71	27.92	28.56	28.58	29.24	29.97
	8H	24.00	24.58	24.66	25.24	26.03	28.89	29.46	29.55	30.13	30.92