

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: P242342

Luminaire Tested: S122DRP-S1005D930-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242342
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-S1005D930-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

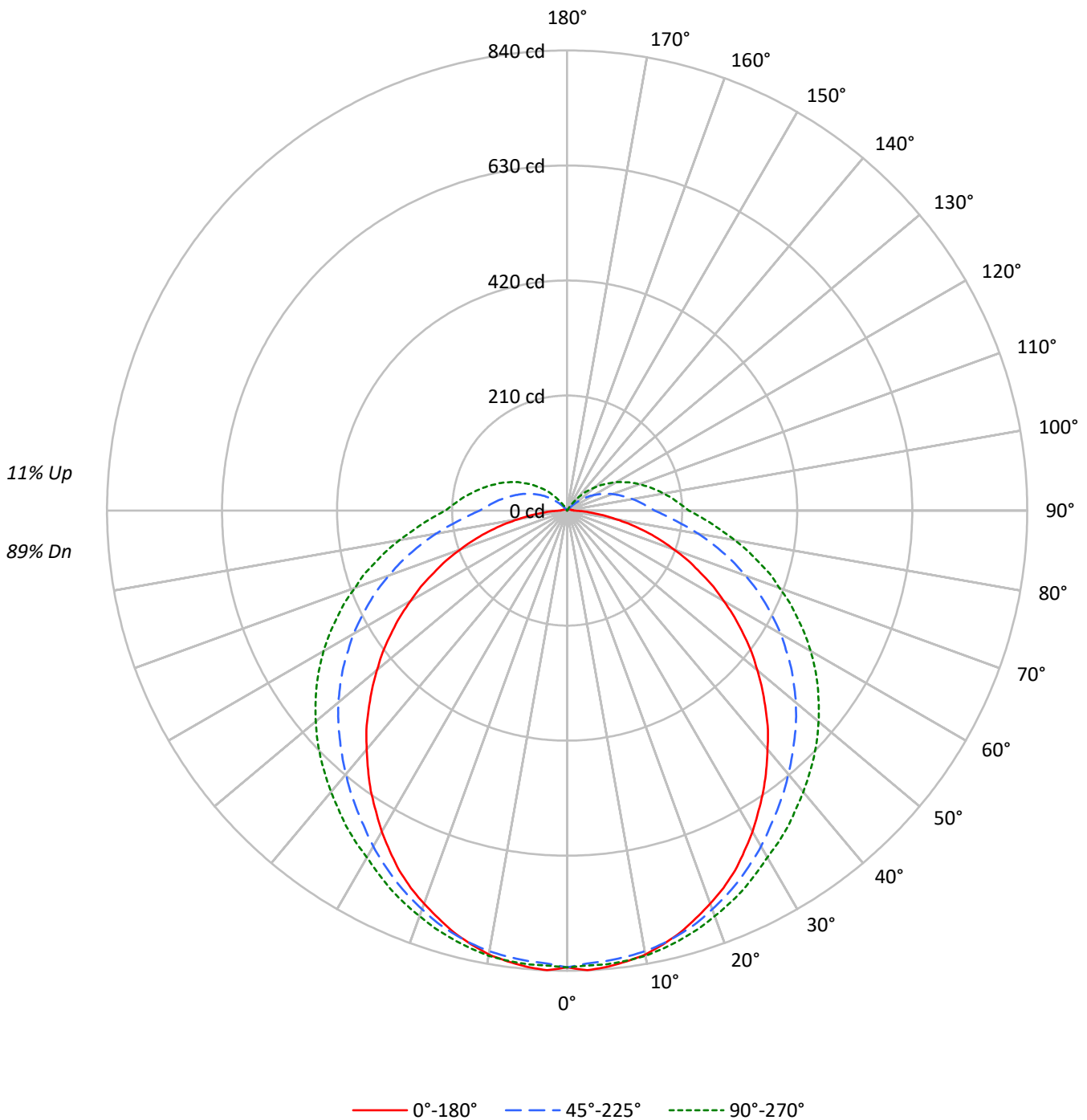
Lumens per Lamp: N/A
Luminaire Lumens: 3181.3 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

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

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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	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°	15882	15882	15882
5°	15959	15222	15138
10°	15856	14711	14501
15°	15636	14181	13845
20°	15360	13621	13219
25°	15086	13085	12654
30°	14701	12539	12090
35°	14311	12011	11680
40°	13900	11557	11271
45°	13510	11147	10916
50°	13091	10769	10565
55°	12652	10365	10209
60°	12116	9947	9832
65°	11559	9465	9397
70°	10927	8944	8928
75°	10124	8425	8488
80°	8858	7888	8032
85°	7631	7388	7644

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13510 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.0	2.5
10°-20°	226.7	7.1
20°-30°	343.5	10.8
30°-40°	418.3	13.1
40°-50°	450.0	14.1
50°-60°	437.0	13.7
60°-70°	381.7	12.0
70°-80°	293.7	9.2
80°-90°	196.8	6.2
90°-100°	135.7	4.3
100°-110°	99.1	3.1
110°-120°	65.4	2.1
120°-130°	36.5	1.1
130°-140°	15.3	0.5
140°-150°	2.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	649.2	20.4
0°-40°	1067.5	33.6
0°-60°	1954.5	61.4
0°-90°	2826.7	88.9
90°-120°	300.3	9.4
90°-150°	354.7	11.1
90°-180°	355.0	11.2
0°-180°	3181.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	834	834	834	834	834	
5°	836	832	825	832	831	79
15°	798	800	800	811	810	225
25°	725	734	744	759	762	333
35°	625	645	668	695	703	390
45°	512	545	587	625	637	396
55°	393	436	499	542	558	351
65°	268	328	399	448	464	267
75°	149	216	294	346	361	157
85°	44	118	196	246	263	46
90°	12	82	160	208	222	8
95°	10	66	139	185	199	8
105°	6	41	104	146	160	7
115°	5	18	72	109	122	4
125°	2	2	41	74	85	3
135°	1	1	13	39	48	1
145°	0	0	0	7	13	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°	833.8	833.8	833.8	833.8	833.8
2.5°	839.8	836.2	827.7	833.8	831.3
5°	836.2	832.5	825.3	832.5	831.3
7.5°	830.1	827.7	821.7	830.1	828.9
10°	822.9	820.5	816.8	826.5	825.3
12.5°	810.8	812.0	809.6	819.3	818.0
15°	797.5	799.9	799.9	810.8	809.6
17.5°	780.6	785.4	789.0	799.9	799.9
20°	763.7	769.7	774.5	787.8	787.8
22.5°	745.5	752.8	760.0	773.3	775.8
25°	725.0	733.5	744.3	758.8	762.5
27.5°	700.8	714.1	726.2	744.3	746.8
30°	676.7	692.4	708.1	727.4	731.0
32.5°	650.1	668.2	687.5	710.5	717.8
35°	624.7	645.3	668.2	694.8	703.3
37.5°	596.9	619.9	648.9	677.9	686.3
40°	569.1	595.7	628.3	659.8	670.6
42.5°	542.5	569.1	607.8	642.8	653.7
45°	512.3	545.0	587.3	624.7	636.8
47.5°	483.3	518.4	566.7	605.4	618.7
50°	453.1	490.6	545.0	586.0	599.3
52.5°	424.1	464.0	522.0	564.3	578.8
55°	392.7	436.2	499.0	542.5	558.3
57.5°	362.5	410.8	473.7	520.8	536.5
60°	329.9	381.8	450.7	496.6	513.5
62.5°	300.9	355.3	424.1	473.7	489.4
65°	268.3	327.5	398.8	448.3	464.0
67.5°	239.3	300.9	373.4	422.9	439.8
70°	207.8	270.7	345.6	397.5	412.0
72.5°	178.8	244.1	320.2	371.0	389.1
75°	148.6	216.3	293.6	345.6	361.3
77.5°	119.6	189.7	268.3	320.2	337.1
80°	90.6	164.3	242.9	293.6	310.5
82.5°	66.5	139.0	218.7	269.5	285.2
85°	43.5	118.4	195.8	246.5	263.4
87.5°	26.6	99.1	176.4	226.0	241.7
90°	12.1	82.2	159.5	207.8	222.3
92.5°	10.9	74.9	148.6	195.8	210.3
95°	9.7	66.5	139.0	184.9	199.4
97.5°	8.5	60.4	130.5	175.2	189.7
100°	8.5	53.2	120.8	165.5	178.8
102.5°	7.3	47.1	112.4	155.9	169.2
105°	6.0	41.1	103.9	146.2	159.5
107.5°	6.0	35.0	95.5	136.5	149.8
110°	4.8	29.0	88.2	126.9	140.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.8	24.2	79.8	118.4	131.7
115°	4.8	18.1	72.5	108.8	122.0
117.5°	3.6	13.3	64.0	100.3	112.4
120°	3.6	8.5	56.8	90.6	103.9
122.5°	3.6	4.8	49.5	82.2	93.0
125°	2.4	2.4	41.1	73.7	84.6
127.5°	2.4	1.2	33.8	64.0	74.9
130°	2.4	1.2	26.6	55.6	65.3
132.5°	2.4	1.2	19.3	47.1	56.8
135°	1.2	1.2	13.3	38.7	48.3
137.5°	1.2	1.2	7.3	30.2	38.7
140°	1.2	0.0	2.4	21.8	29.0
142.5°	1.2	0.0	0.0	14.5	20.5
145°	0.0	0.0	0.0	7.3	13.3
147.5°	0.0	0.0	0.0	1.2	4.8
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	17.83	19.31	18.35	19.84	20.41	20.89	22.37	21.41	22.90	23.48
	3H	19.33	20.68	19.87	21.22	21.83	23.52	24.87	24.05	25.41	26.02
	4H	19.83	21.11	20.39	21.67	22.29	24.80	26.08	25.35	26.64	27.26
	6H	20.14	21.34	20.71	21.91	22.55	26.13	27.33	26.70	27.89	28.54
	8H	20.22	21.37	20.80	21.96	22.61	26.81	27.96	27.39	28.55	29.20
	12H	20.26	21.36	20.85	21.94	22.62	27.56	28.67	28.15	29.25	29.93
4H	2H	18.94	20.22	19.50	20.78	21.40	21.28	22.57	21.84	23.12	23.75
	3H	20.69	21.80	21.27	22.39	23.04	24.12	25.22	24.69	25.81	26.46
	4H	21.34	22.35	21.93	22.95	23.63	25.56	26.57	26.15	27.17	27.86
	6H	21.79	22.69	22.40	23.31	24.00	27.07	27.96	27.68	28.59	29.28
	8H	21.92	22.76	22.53	23.38	24.09	27.85	28.69	28.46	29.32	30.02
	12H	21.99	22.76	22.63	23.41	24.12	28.72	29.48	29.35	30.14	30.85
8H	4H	22.18	23.02	22.80	23.65	24.36	25.76	26.60	26.37	27.23	27.93
	6H	22.84	23.56	23.49	24.23	24.94	27.42	28.14	28.06	28.80	29.51
	8H	23.07	23.72	23.73	24.40	25.12	28.32	28.97	28.98	29.64	30.37
	12H	23.24	23.82	23.90	24.48	25.27	29.35	29.93	30.02	30.60	31.38
12H	4H	22.41	23.18	23.05	23.83	24.54	25.76	26.53	26.40	27.18	27.89
	6H	23.19	23.84	23.84	24.51	25.23	27.45	28.10	28.11	28.77	29.50
	8H	23.52	24.10	24.18	24.77	25.55	28.42	29.00	29.08	29.66	30.45