

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: P243205

Luminaire Tested: S122DRP-H675D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243205
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-H675D935-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

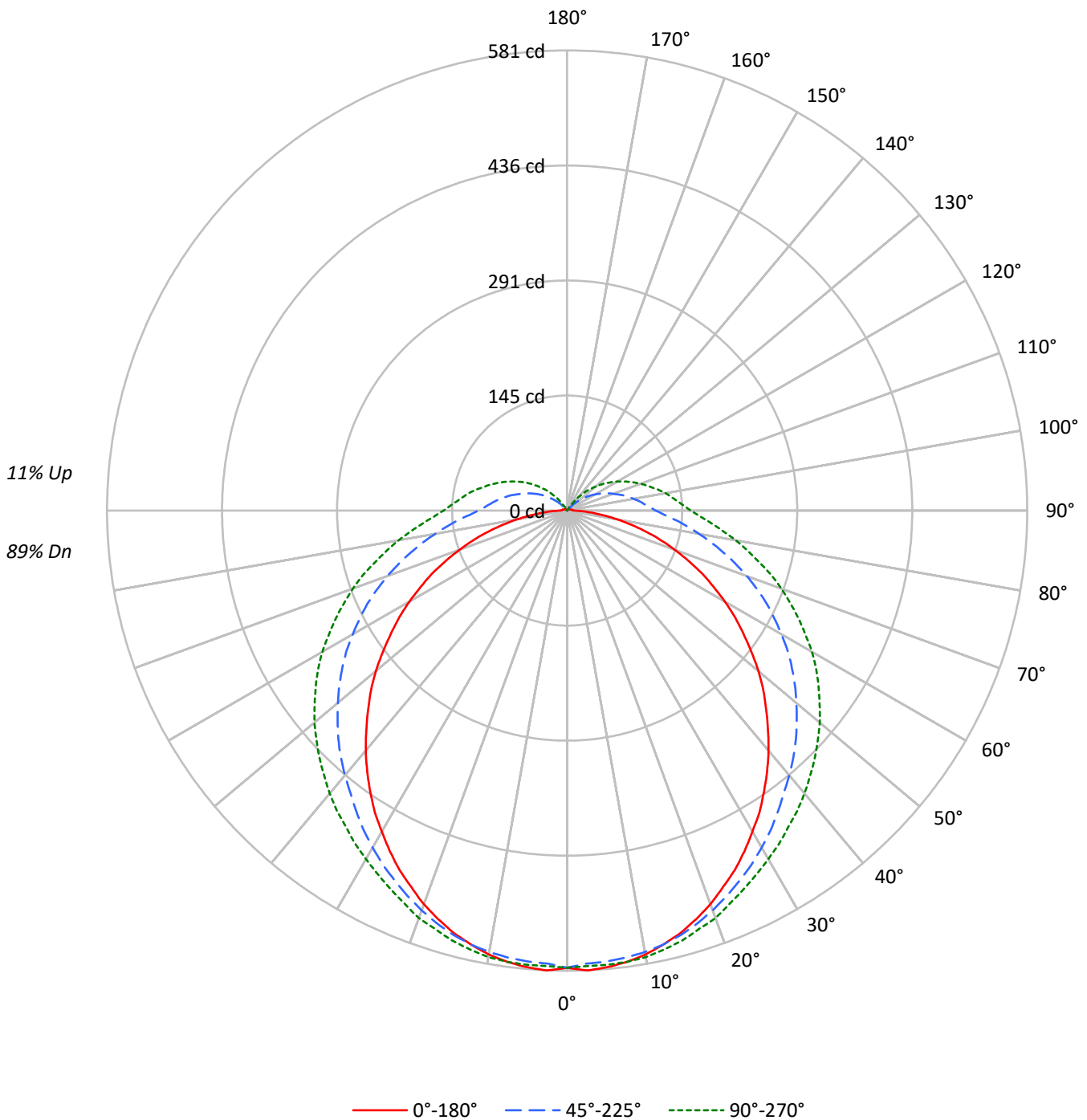
Lumens per Lamp: N/A
Luminaire Lumens: 2214.9 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 23.6
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°	10994	10994	10994
5°	11046	10543	10482
10°	10968	10192	10058
15°	10829	9834	9609
20°	10640	9444	9187
25°	10421	9059	8752
30°	10165	8698	8403
35°	9926	8339	8091
40°	9660	8029	7837
45°	9369	7751	7579
50°	9104	7465	7340
55°	8754	7197	7086
60°	8444	6901	6833
65°	8104	6600	6530
70°	7609	6242	6237
75°	7065	5860	5892
80°	6286	5482	5592
85°	5508	5188	5296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	2.5
10°-20°	157.1	7.1
20°-30°	238.0	10.7
30°-40°	290.3	13.1
40°-50°	312.4	14.1
50°-60°	303.7	13.7
60°-70°	265.5	12.0
70°-80°	204.4	9.2
80°-90°	137.4	6.2
90°-100°	95.1	4.3
100°-110°	69.9	3.2
110°-120°	46.5	2.1
120°-130°	26.3	1.2
130°-140°	11.3	0.5
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	449.9	20.3
0°-40°	740.2	33.4
0°-60°	1356.3	61.2
0°-90°	1963.6	88.7
90°-120°	211.5	9.5
90°-150°	251.3	11.3
90°-180°	251.0	11.3
0°-180°	2214.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	579	576	572	576	576	55
15°	552	555	555	562	562	156
25°	501	509	515	527	527	230
35°	433	448	464	482	487	271
45°	355	377	408	433	442	274
55°	272	304	346	378	388	244
65°	188	228	278	312	322	185
75°	104	151	204	240	251	109
85°	31	83	138	172	182	32
90°	9	58	112	146	156	6
95°	6	47	97	129	139	5
105°	5	29	74	103	112	5
115°	3	14	51	77	86	3
125°	2	2	30	52	60	2
135°	1	1	10	28	35	1
145°	1	0	0	6	10	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°	577.2	577.2	577.2	577.2	577.2
2.5°	581.2	578.8	572.4	577.2	575.6
5°	578.8	576.4	571.6	576.4	575.6
7.5°	574.8	573.2	569.2	575.6	574.8
10°	569.2	568.4	565.9	572.4	572.4
12.5°	561.1	561.9	561.1	568.4	567.6
15°	552.3	554.7	554.7	561.9	561.9
17.5°	541.0	545.0	546.7	554.7	553.9
20°	529.0	533.8	537.0	545.8	547.5
22.5°	514.5	521.7	526.6	536.2	537.0
25°	500.8	508.9	515.3	526.6	527.4
27.5°	484.8	494.4	504.0	515.3	517.7
30°	467.9	479.9	491.2	504.8	508.1
32.5°	451.8	463.9	478.3	492.8	498.4
35°	433.3	447.8	463.9	481.5	487.2
37.5°	414.8	430.1	449.4	470.3	477.5
40°	395.5	413.2	436.5	459.0	466.3
42.5°	375.4	394.7	422.9	446.2	454.2
45°	355.3	377.0	408.4	433.3	442.1
47.5°	336.0	359.3	393.1	421.2	429.3
50°	315.1	340.9	377.8	406.8	416.4
52.5°	293.4	322.4	362.6	392.3	401.9
55°	271.7	303.9	346.5	377.8	387.5
57.5°	251.6	285.4	330.4	361.8	373.0
60°	229.9	266.1	312.7	345.7	356.9
62.5°	208.2	247.6	295.0	328.8	339.2
65°	188.1	228.3	278.1	311.9	322.4
67.5°	165.6	208.2	259.7	295.0	304.7
70°	144.7	189.7	241.2	276.5	287.8
72.5°	123.8	169.6	222.7	258.1	270.1
75°	103.7	151.1	204.2	240.4	250.8
77.5°	82.8	132.6	186.5	222.7	233.1
80°	64.3	114.2	168.8	205.0	216.2
82.5°	45.8	97.3	152.7	188.1	198.6
85°	31.4	82.8	137.5	172.0	182.5
87.5°	18.5	69.1	123.0	157.6	168.0
90°	8.8	57.9	111.7	145.5	156.0
92.5°	7.2	52.3	103.7	136.7	147.1
95°	6.4	46.6	97.3	129.4	139.1
97.5°	6.4	42.6	91.6	123.0	132.6
100°	5.6	37.8	85.2	115.8	126.2
102.5°	5.6	33.0	79.6	109.3	119.0
105°	4.8	28.9	74.0	102.9	111.7
107.5°	4.0	24.9	67.5	96.5	105.3
110°	4.0	20.9	61.9	90.0	98.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	17.7	57.1	83.6	92.4
115°	3.2	13.7	51.4	77.2	86.0
117.5°	3.2	9.6	45.8	70.7	79.6
120°	2.4	6.4	41.0	65.1	73.2
122.5°	2.4	4.0	35.4	58.7	66.7
125°	2.4	1.6	30.5	52.3	60.3
127.5°	1.6	1.6	24.9	46.6	53.9
130°	1.6	0.8	20.1	40.2	47.4
132.5°	1.6	0.8	15.3	34.6	41.0
135°	0.8	0.8	10.5	28.1	35.4
137.5°	0.8	0.8	5.6	22.5	28.1
140°	0.8	0.0	2.4	16.9	21.7
142.5°	0.8	0.0	0.0	11.3	16.1
145°	0.8	0.0	0.0	6.4	9.6
147.5°	0.0	0.0	0.0	1.6	4.8
150°	0.0	0.0	0.0	0.0	0.8
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	16.55	18.03	17.08	18.56	19.14	19.61	21.09	20.14	21.62	22.20
	3H	18.05	19.40	18.59	19.94	20.56	22.24	23.60	22.79	24.14	24.76
	4H	18.55	19.83	19.11	20.39	21.02	23.52	24.80	24.08	25.36	25.99
	6H	18.87	20.06	19.44	20.63	21.28	24.85	26.05	25.42	26.61	27.26
	8H	18.94	20.09	19.53	20.68	21.34	25.53	26.68	26.12	27.27	27.93
	12H	18.98	20.08	19.58	20.67	21.35	26.29	27.39	26.88	27.97	28.66
4H	2H	17.67	18.95	18.23	19.50	20.14	20.00	21.29	20.57	21.84	22.48
	3H	19.42	20.52	20.00	21.12	21.77	22.85	23.95	23.42	24.54	25.20
	4H	20.07	21.08	20.67	21.69	22.37	24.29	25.30	24.88	25.90	26.59
	6H	20.53	21.42	21.14	22.05	22.74	25.79	26.69	26.41	27.32	28.01
	8H	20.65	21.49	21.27	22.12	22.83	26.58	27.42	27.19	28.05	28.76
	12H	20.73	21.49	21.37	22.15	22.86	27.44	28.21	28.08	28.86	29.58
8H	4H	20.91	21.75	21.53	22.38	23.09	24.48	25.32	25.10	25.95	26.66
	6H	21.58	22.29	22.22	22.96	23.68	26.14	26.86	26.79	27.53	28.24
	8H	21.81	22.46	22.47	23.13	23.86	27.05	27.70	27.71	28.38	29.10
	12H	21.98	22.55	22.64	23.22	24.01	28.08	28.66	28.75	29.33	30.12
12H	4H	21.14	21.91	21.78	22.56	23.28	24.49	25.25	25.13	25.91	26.62
	6H	21.92	22.57	22.58	23.24	23.97	26.18	26.83	26.84	27.50	28.23
	8H	22.26	22.84	22.92	23.50	24.29	27.15	27.73	27.81	28.39	29.18