

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: P243133

Luminaire Tested: S122DRP-H1005D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243133  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-H1005D930-X4F0-XX-UDD-F-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

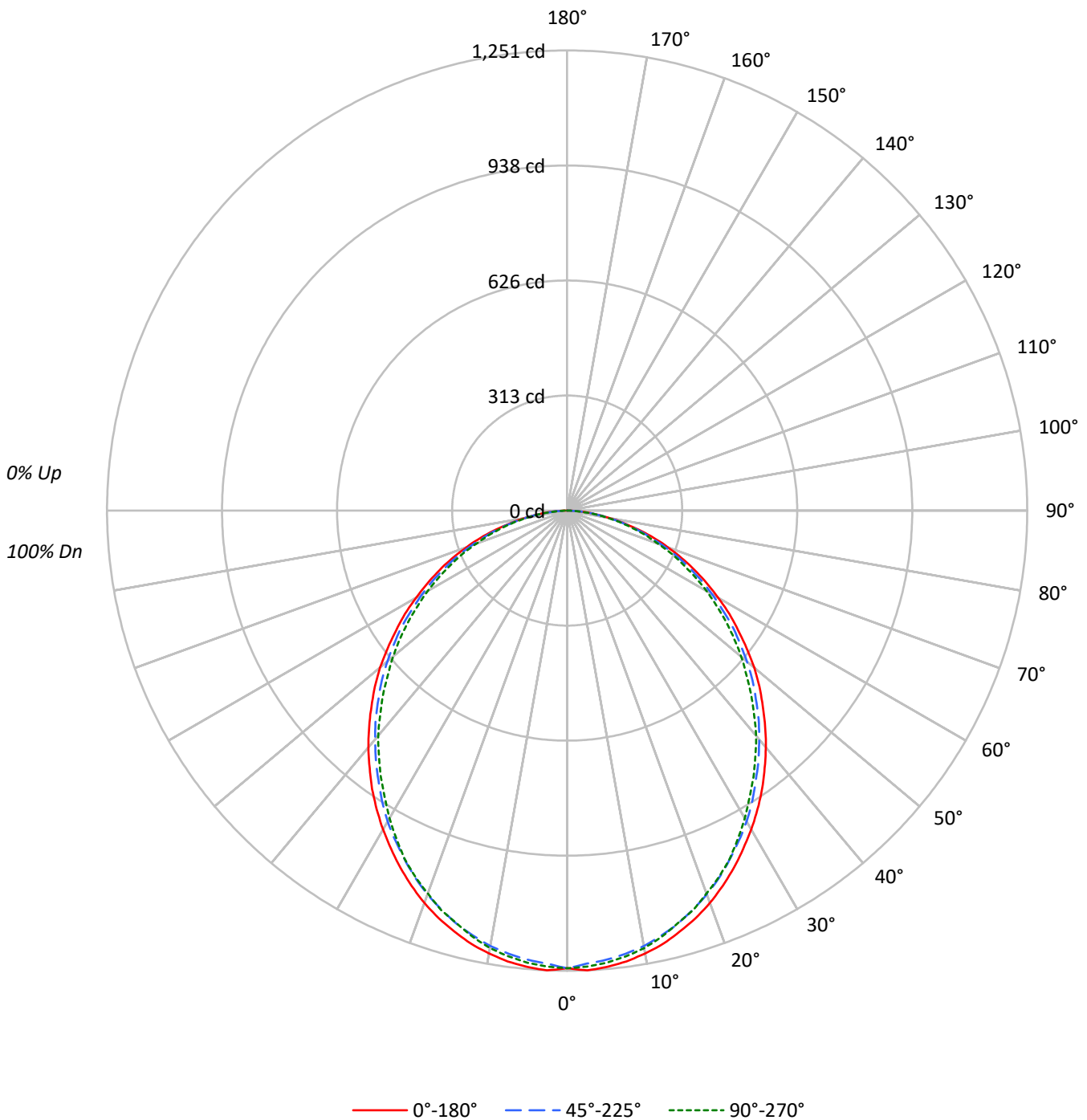
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3166.2 lumens  
Efficiency: N/A  
Efficacy: 84.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.7  
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	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					100			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	23701	23701	23701
5°	23813	23440	23595
10°	23645	23247	23357
15°	23362	22932	22908
20°	23013	22502	22455
25°	22536	21981	21956
30°	22021	21464	21238
35°	21493	20800	20532
40°	20902	20188	19875
45°	20265	19554	19061
50°	19676	18894	18316
55°	18853	18205	17518
60°	18042	17345	16690
65°	17262	16437	15712
70°	16223	15393	14625
75°	14770	14182	13505
80°	12834	12450	11945
85°	11037	9769	9026

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 20265 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.1	3.7
10°-20°	329.8	10.4
20°-30°	484.9	15.3
30°-40°	563.0	17.8
40°-50°	562.2	17.8
50°-60°	489.7	15.5
60°-70°	362.1	11.4
70°-80°	204.1	6.4
80°-90°	53.2	1.7
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°	931.8	29.4
0°-40°	1494.8	47.2
0°-60°	2546.7	80.4
0°-90°	3166.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3166.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1245	1240	1226	1236	1234	118
15°	1185	1179	1163	1168	1162	334
25°	1072	1063	1046	1045	1045	494
35°	924	914	894	886	883	578
45°	752	744	726	714	708	581
55°	568	563	548	533	528	508
65°	383	377	365	353	349	379
75°	201	200	193	186	184	213
85°	50	48	45	42	41	57
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1244.3	1244.3	1244.3	1244.3	1244.3
2.5°	1251.2	1245.4	1232.8	1243.1	1240.9
5°	1245.4	1239.7	1225.9	1236.3	1234.0
7.5°	1236.3	1230.5	1215.6	1225.9	1222.5
10°	1222.5	1215.6	1201.9	1208.7	1207.6
12.5°	1206.4	1199.6	1183.5	1189.2	1187.0
15°	1184.7	1178.9	1162.9	1167.5	1161.7
17.5°	1161.7	1152.5	1137.6	1142.2	1138.8
20°	1135.3	1126.2	1110.1	1112.4	1107.8
22.5°	1104.4	1095.2	1080.3	1080.3	1078.0
25°	1072.3	1063.1	1045.9	1044.7	1044.7
27.5°	1036.7	1028.7	1011.5	1008.1	1005.8
30°	1001.2	994.3	975.9	969.1	965.6
32.5°	963.3	954.1	936.9	928.9	923.2
35°	924.3	914.0	894.5	886.5	883.0
37.5°	881.9	871.6	854.4	847.5	840.6
40°	840.6	831.4	811.9	801.6	799.3
42.5°	797.0	787.9	770.7	759.2	752.3
45°	752.3	744.3	725.9	714.5	707.6
47.5°	708.7	699.6	683.5	669.7	660.6
50°	664.0	654.8	637.6	621.6	618.1
52.5°	614.7	609.0	591.8	576.8	572.3
55°	567.7	563.1	548.2	533.3	527.5
57.5°	522.9	517.2	500.0	488.5	481.7
60°	473.6	470.2	455.3	442.7	438.1
62.5°	427.8	423.2	410.6	397.9	392.2
65°	383.0	377.3	364.7	353.2	348.6
67.5°	337.2	331.4	321.1	311.9	307.3
70°	291.3	286.7	276.4	268.4	262.6
72.5°	246.6	242.0	232.8	224.8	223.6
75°	200.7	199.5	192.7	185.8	183.5
77.5°	158.3	157.1	152.5	149.1	146.8
80°	117.0	117.0	113.5	110.1	108.9
82.5°	80.3	81.4	78.0	75.7	75.7
85°	50.5	48.2	44.7	42.4	41.3
87.5°	20.6	17.2	16.1	12.6	11.5
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	22.28	23.89	22.65	24.21	24.52	21.85	23.46	22.22	23.78	24.09
	3H	24.04	25.49	24.41	25.82	26.18	23.55	25.01	23.93	25.33	25.70
	4H	24.68	26.05	25.08	26.40	26.77	24.18	25.55	24.58	25.90	26.27
	6H	25.14	26.41	25.55	26.77	27.16	24.64	25.91	25.05	26.27	26.66
	8H	25.28	26.49	25.70	26.88	27.28	24.78	25.99	25.21	26.38	26.78
	12H	25.37	26.53	25.80	26.91	27.34	24.86	26.02	25.29	26.40	26.83
4H	2H	22.84	24.21	23.24	24.56	24.93	22.50	23.87	22.90	24.22	24.59
	3H	24.82	25.96	25.23	26.36	26.76	24.42	25.56	24.83	25.96	26.36
	4H	25.60	26.63	26.03	27.05	27.48	25.17	26.20	25.60	26.61	27.05
	6H	26.18	27.09	26.64	27.53	27.98	25.75	26.65	26.20	27.09	27.55
	8H	26.37	27.21	26.83	27.66	28.12	25.93	26.78	26.39	27.22	27.68
	12H	26.50	27.26	26.98	27.74	28.21	26.05	26.81	26.53	27.28	27.75
8H	4H	25.87	26.71	26.33	27.16	27.62	25.49	26.33	25.95	26.77	27.24
	6H	26.57	27.27	27.06	27.76	28.24	26.18	26.88	26.68	27.37	27.85
	8H	26.82	27.45	27.33	27.96	28.45	26.43	27.06	26.94	27.57	28.05
	12H	27.03	27.59	27.54	28.08	28.64	26.61	27.17	27.12	27.66	28.22
12H	4H	25.89	26.65	26.37	27.13	27.60	25.52	26.28	26.00	26.76	27.23
	6H	26.61	27.24	27.12	27.75	28.24	26.24	26.87	26.75	27.38	27.86
	8H	26.92	27.48	27.43	27.97	28.53	26.54	27.10	27.05	27.59	28.15