

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: P243114

Luminaire Tested: S122DRP-H1005D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243114
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-H1005D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

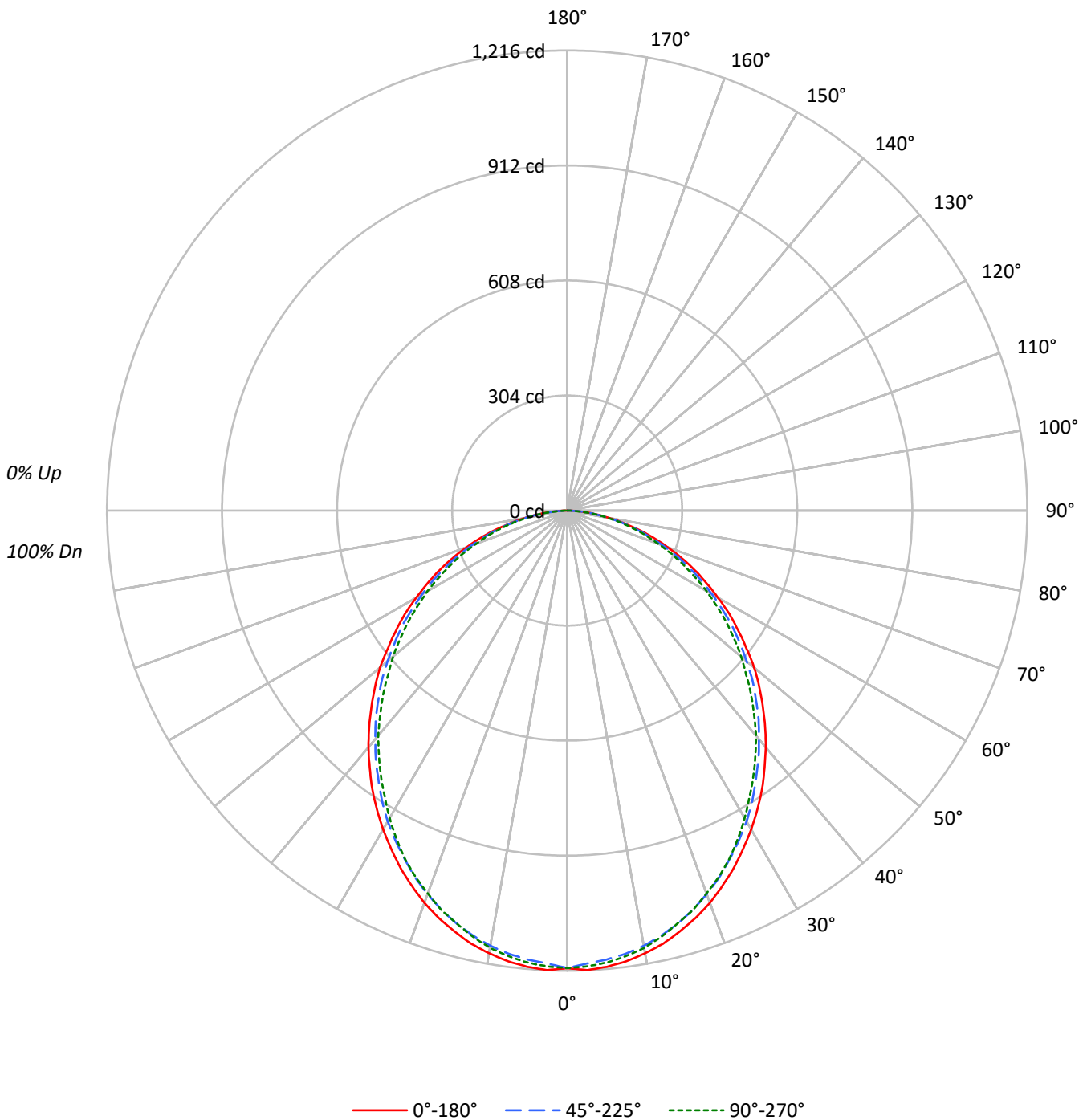
Lumens per Lamp: N/A
Luminaire Lumens: 3076.5 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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°	23029	23029	23029
5°	23138	22776	22925
10°	22974	22587	22695
15°	22699	22281	22260
20°	22362	21863	21819
25°	21897	21357	21334
30°	21396	20857	20635
35°	20883	20211	19951
40°	20310	19616	19313
45°	19691	19002	18520
50°	19119	18358	17798
55°	18318	17687	17023
60°	17532	16853	16217
65°	16775	15969	15265
70°	15761	14953	14213
75°	14351	13777	13122
80°	12472	12099	11616
85°	10709	9507	8764

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19691 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.8	3.7
10°-20°	320.4	10.4
20°-30°	471.1	15.3
30°-40°	547.0	17.8
40°-50°	546.3	17.8
50°-60°	475.8	15.5
60°-70°	351.9	11.4
70°-80°	198.4	6.4
80°-90°	51.7	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°	905.4	29.4
0°-40°	1452.4	47.2
0°-60°	2474.5	80.4
0°-90°	3076.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3076.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1210	1205	1191	1201	1199	115
15°	1151	1146	1130	1134	1129	325
25°	1042	1033	1016	1015	1015	480
35°	898	888	869	861	858	561
45°	731	723	705	694	688	565
55°	552	547	533	518	513	494
65°	372	367	354	343	339	368
75°	195	194	187	180	178	207
85°	49	47	44	41	40	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1209.0	1209.0	1209.0	1209.0	1209.0
2.5°	1215.7	1210.1	1197.9	1207.9	1205.7
5°	1210.1	1204.6	1191.2	1201.2	1199.0
7.5°	1201.2	1195.6	1181.2	1191.2	1187.8
10°	1187.8	1181.2	1167.8	1174.5	1173.4
12.5°	1172.2	1165.6	1150.0	1155.5	1153.3
15°	1151.1	1145.5	1129.9	1134.4	1128.8
17.5°	1128.8	1119.9	1105.4	1109.8	1106.5
20°	1103.2	1094.2	1078.6	1080.9	1076.4
22.5°	1073.1	1064.2	1049.7	1049.7	1047.4
25°	1041.9	1033.0	1016.2	1015.1	1015.1
27.5°	1007.3	999.5	982.8	979.5	977.2
30°	972.8	966.1	948.3	941.6	938.2
32.5°	936.0	927.1	910.4	902.6	897.0
35°	898.1	888.1	869.2	861.4	858.0
37.5°	856.9	846.9	830.2	823.5	816.8
40°	816.8	807.9	788.9	778.9	776.7
42.5°	774.4	765.5	748.8	737.7	731.0
45°	731.0	723.2	705.4	694.2	687.5
47.5°	688.6	679.7	664.1	650.8	641.8
50°	645.2	636.3	619.5	603.9	600.6
52.5°	597.3	591.7	575.0	560.5	556.0
55°	551.6	547.1	532.6	518.1	512.6
57.5°	508.1	502.5	485.8	474.7	468.0
60°	460.2	456.9	442.4	430.1	425.7
62.5°	415.6	411.2	398.9	386.7	381.1
65°	372.2	366.6	354.3	343.2	338.7
67.5°	327.6	322.0	312.0	303.1	298.6
70°	283.0	278.6	268.5	260.7	255.2
72.5°	239.6	235.1	226.2	218.4	217.3
75°	195.0	193.9	187.2	180.5	178.3
77.5°	153.8	152.7	148.2	144.9	142.6
80°	113.7	113.7	110.3	107.0	105.9
82.5°	78.0	79.1	75.8	73.5	73.5
85°	49.0	46.8	43.5	41.2	40.1
87.5°	20.1	16.7	15.6	12.3	11.1
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	22.18	23.79	22.55	24.11	24.42	21.75	23.36	22.12	23.68	23.99
	3H	23.94	25.39	24.31	25.72	26.08	23.45	24.91	23.83	25.24	25.60
	4H	24.58	25.95	24.98	26.30	26.67	24.08	25.45	24.48	25.80	26.17
	6H	25.04	26.31	25.45	26.67	27.06	24.54	25.81	24.95	26.17	26.57
	8H	25.18	26.39	25.60	26.78	27.18	24.68	25.89	25.11	26.28	26.68
	12H	25.27	26.43	25.70	26.81	27.24	24.76	25.92	25.19	26.30	26.73
4H	2H	22.74	24.11	23.14	24.46	24.83	22.40	23.77	22.80	24.12	24.49
	3H	24.72	25.86	25.13	26.26	26.66	24.32	25.46	24.73	25.86	26.26
	4H	25.50	26.53	25.93	26.95	27.38	25.07	26.10	25.50	26.51	26.95
	6H	26.08	26.99	26.54	27.43	27.88	25.65	26.55	26.10	26.99	27.45
	8H	26.27	27.11	26.73	27.56	28.02	25.83	26.68	26.29	27.12	27.58
	12H	26.40	27.16	26.88	27.64	28.11	25.95	26.71	26.43	27.18	27.65
8H	4H	25.77	26.61	26.23	27.06	27.52	25.39	26.23	25.85	26.67	27.14
	6H	26.47	27.17	26.96	27.66	28.14	26.08	26.79	26.58	27.27	27.75
	8H	26.72	27.35	27.23	27.86	28.35	26.33	26.96	26.84	27.47	27.95
	12H	26.93	27.49	27.44	27.98	28.54	26.51	27.07	27.02	27.56	28.12
12H	4H	25.79	26.55	26.27	27.03	27.50	25.42	26.18	25.90	26.66	27.13
	6H	26.51	27.14	27.02	27.65	28.14	26.14	26.77	26.65	27.28	27.76
	8H	26.82	27.38	27.33	27.87	28.43	26.44	27.00	26.95	27.49	28.05