

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: P242429

Luminaire Tested: S123DRP-S775D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242429  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DRP-S775D830-X4F0-XX-UDD-F-W  
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

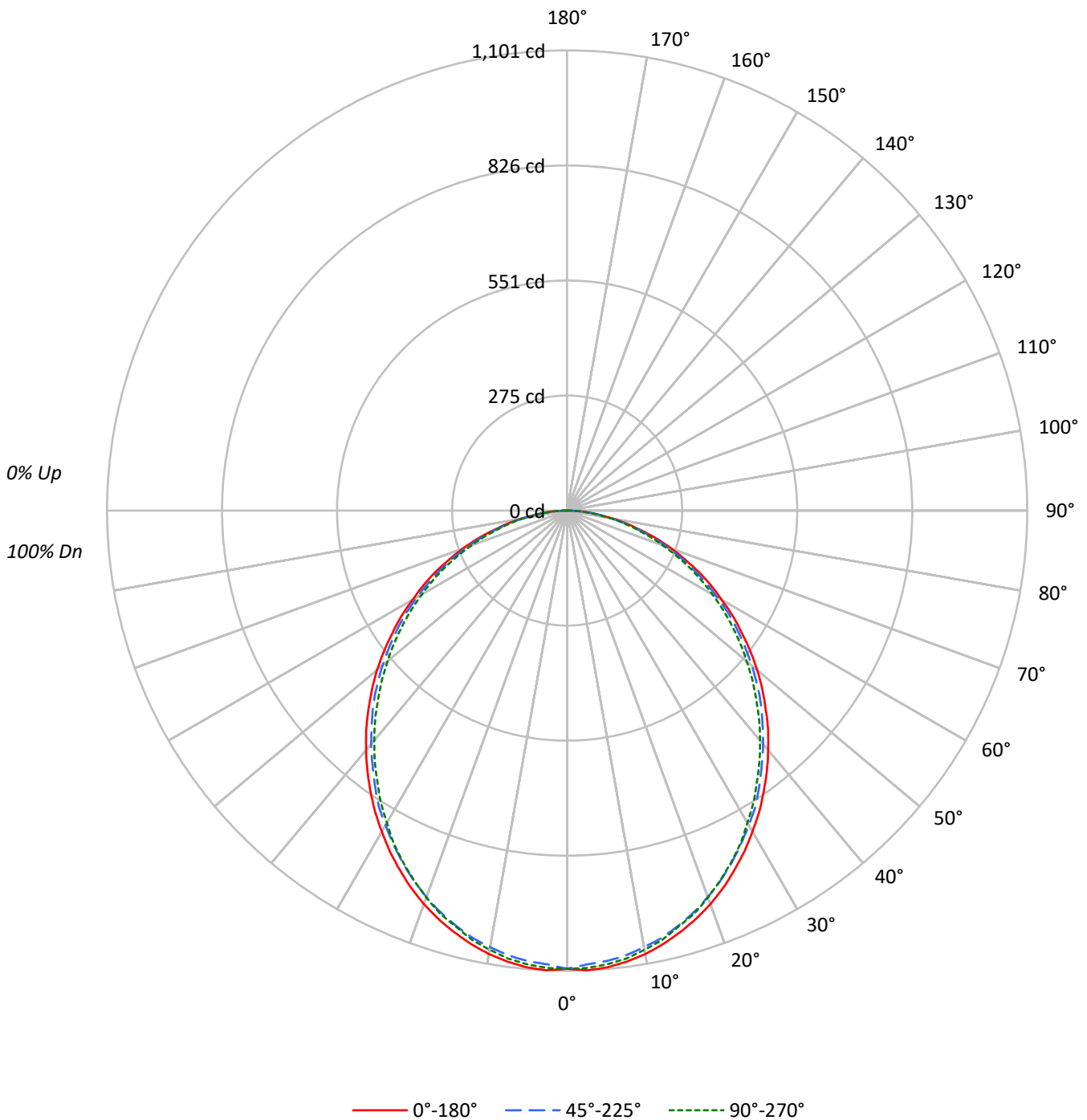
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2852.8 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3  
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	13287	13287	13287
5°	13349	13165	13258
10°	13260	13052	13133
15°	13105	12904	12928
20°	12924	12693	12706
25°	12682	12442	12417
30°	12413	12163	12070
35°	12134	11869	11715
40°	11842	11543	11364
45°	11519	11245	10971
50°	11197	10877	10575
55°	10776	10497	10178
60°	10352	10053	9733
65°	9975	9571	9273
70°	9420	9020	8619
75°	8608	8299	7948
80°	7762	7434	7371
85°	6815	6550	6286

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11519 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.3	3.6
10°-20°	291.8	10.2
20°-30°	430.9	15.1
30°-40°	503.3	17.6
40°-50°	506.0	17.7
50°-60°	444.5	15.6
60°-70°	331.0	11.6
70°-80°	188.4	6.6
80°-90°	53.5	1.9
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°	826.1	29.0
0°-40°	1329.4	46.6
0°-60°	2279.9	79.9
0°-90°	2852.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2852.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1096	1096	1096	1096	1096	
5°	1097	1092	1082	1092	1090	104
15°	1044	1041	1028	1036	1030	294
25°	948	942	930	931	928	437
35°	820	814	802	796	792	513
45°	672	668	656	645	640	519
55°	510	509	497	486	482	457
65°	348	343	334	326	323	343
75°	184	180	177	172	170	196
85°	49	47	47	45	45	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1096.2	1096.2	1096.2	1096.2	1096.2
2.5°	1100.9	1097.1	1086.8	1096.2	1095.2
5°	1097.1	1092.4	1082.0	1091.5	1089.6
7.5°	1088.6	1083.9	1073.6	1082.0	1081.1
10°	1077.3	1072.6	1060.4	1068.8	1067.0
12.5°	1062.2	1058.5	1047.2	1052.8	1051.9
15°	1044.3	1040.6	1028.3	1035.9	1030.2
17.5°	1024.5	1019.8	1007.6	1013.2	1011.3
20°	1001.9	996.3	984.0	987.8	985.0
22.5°	976.5	970.8	958.6	961.4	957.6
25°	948.2	942.5	930.3	931.2	928.4
27.5°	919.0	913.3	900.1	901.1	898.2
30°	886.9	882.2	869.0	869.0	862.4
32.5°	854.9	848.3	838.9	832.3	829.4
35°	820.0	814.4	802.1	796.4	791.7
37.5°	785.1	777.6	765.3	758.7	755.9
40°	748.4	742.7	729.5	722.0	718.2
42.5°	711.6	705.0	691.8	684.3	680.5
45°	672.0	668.3	656.0	644.7	640.0
47.5°	633.4	627.7	616.4	605.1	601.3
50°	593.8	589.1	576.8	566.5	560.8
52.5°	552.3	549.5	536.3	527.8	522.2
55°	509.9	509.0	496.7	486.4	481.6
57.5°	470.3	466.6	457.1	447.7	442.1
60°	427.0	426.0	414.7	406.2	401.5
62.5°	388.3	385.5	374.2	365.7	362.9
65°	347.8	343.1	333.7	326.1	323.3
67.5°	304.4	300.7	293.1	286.5	282.8
70°	265.8	260.1	254.5	247.9	243.2
72.5°	225.3	221.5	214.9	209.2	207.4
75°	183.8	180.0	177.2	172.5	169.7
77.5°	147.0	145.2	141.4	137.6	137.6
80°	111.2	108.4	106.5	105.6	105.6
82.5°	76.3	76.3	76.3	74.5	73.5
85°	49.0	47.1	47.1	45.2	45.2
87.5°	24.5	21.7	20.7	19.8	19.8
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	20.35	21.96	20.71	22.28	22.59	20.03	21.65	20.40	21.96	22.28
	3H	22.12	23.58	22.49	23.90	24.26	21.75	23.21	22.12	23.54	23.90
	4H	22.77	24.15	23.17	24.50	24.87	22.38	23.76	22.78	24.11	24.48
	6H	23.26	24.54	23.67	24.90	25.29	22.87	24.15	23.28	24.51	24.90
	8H	23.41	24.63	23.84	25.02	25.42	23.03	24.25	23.45	24.64	25.04
	12H	23.52	24.69	23.95	25.07	25.50	23.14	24.30	23.57	24.69	25.11
4H	2H	20.92	22.30	21.32	22.65	23.03	20.67	22.05	21.07	22.40	22.78
	3H	22.92	24.07	23.33	24.47	24.87	22.61	23.77	23.02	24.16	24.56
	4H	23.70	24.75	24.13	25.16	25.59	23.37	24.42	23.80	24.83	25.27
	6H	24.32	25.23	24.77	25.67	26.13	23.99	24.90	24.44	25.34	25.79
	8H	24.52	25.37	24.98	25.82	26.28	24.19	25.05	24.65	25.49	25.95
	12H	24.67	25.44	25.15	25.92	26.38	24.34	25.11	24.82	25.58	26.05
8H	4H	23.99	24.84	24.45	25.28	25.75	23.70	24.55	24.16	24.99	25.46
	6H	24.72	25.43	25.22	25.92	26.40	24.43	25.14	24.92	25.63	26.10
	8H	25.00	25.63	25.51	26.14	26.63	24.71	25.35	25.22	25.85	26.34
	12H	25.22	25.79	25.73	26.28	26.84	24.93	25.50	25.44	25.99	26.55
12H	4H	24.02	24.78	24.50	25.26	25.73	23.73	24.50	24.21	24.97	25.44
	6H	24.77	25.41	25.28	25.92	26.40	24.49	25.13	25.00	25.64	26.12
	8H	25.11	25.67	25.61	26.16	26.72	24.83	25.40	25.34	25.89	26.45