

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: P242532

Luminaire Tested: S123RDRP-S775D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242532  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S775D830-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

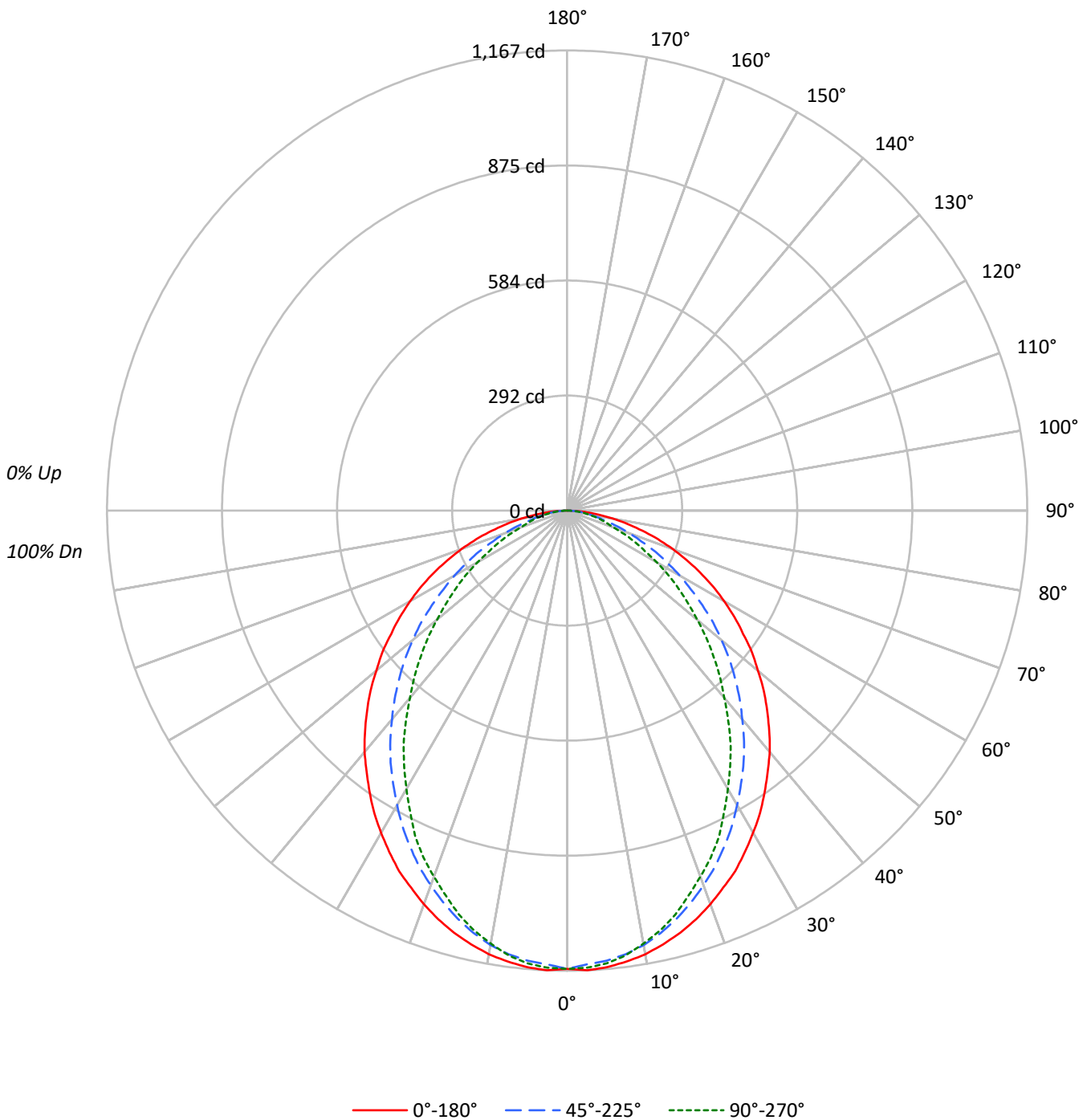
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2625.5 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
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																		
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	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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86																												
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73																												
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62																												
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54																												
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47																												
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42																												
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37																												
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																												
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																												
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28																												

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

	0°	45°	90°
0°	14087	14087	14087
5°	14141	13945	14026
10°	14061	13770	13724
15°	13909	13449	13307
20°	13701	13045	12742
25°	13488	12593	12189
30°	13206	12070	11411
35°	12915	11548	10697
40°	12647	10932	9814
45°	12296	10325	9015
50°	11908	9634	8122
55°	11513	8844	7291
60°	11152	7998	6376
65°	10678	7081	5461
70°	10086	5947	4409
75°	9226	4679	4149
80°	8223	4146	3818
85°	6954	3672	3407

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12296 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.3	4.2
10°-20°	303.9	11.6
20°-30°	437.6	16.7
30°-40°	492.8	18.8
40°-50°	471.4	18.0
50°-60°	385.9	14.7
60°-70°	260.2	9.9
70°-80°	130.5	5.0
80°-90°	34.1	1.3
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°	850.8	32.4
0°-40°	1343.5	51.2
0°-60°	2200.8	83.8
0°-90°	2625.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2625.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1162	1157	1146	1155	1153	110
15°	1108	1098	1072	1067	1060	312
25°	1008	985	942	922	911	464
35°	873	839	780	740	723	546
45°	717	675	602	549	526	554
55°	545	499	418	364	345	489
65°	372	320	247	201	190	368
75°	197	152	100	90	89	210
85°	50	29	26	24	24	58
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1162.2	1162.2	1162.2	1162.2	1162.2
2.5°	1166.9	1163.1	1151.8	1162.2	1160.3
5°	1162.2	1157.4	1146.1	1154.6	1152.7
7.5°	1153.7	1149.0	1134.8	1140.5	1137.7
10°	1142.4	1135.8	1118.8	1119.7	1115.0
12.5°	1126.3	1118.8	1097.1	1096.2	1090.5
15°	1108.4	1098.1	1071.7	1067.0	1060.4
17.5°	1086.8	1075.4	1042.5	1033.0	1023.6
20°	1062.2	1047.2	1011.3	999.1	987.8
22.5°	1034.9	1017.0	978.4	962.3	952.0
25°	1008.5	985.0	941.6	921.8	911.4
27.5°	976.5	951.0	903.9	877.5	861.5
30°	943.5	915.2	862.4	830.4	815.3
32.5°	910.5	877.5	821.0	785.1	769.1
35°	872.8	838.9	780.4	739.9	722.9
37.5°	835.1	798.3	737.1	691.8	671.1
40°	799.3	757.8	690.9	641.9	620.2
42.5°	758.7	717.3	647.5	592.9	574.0
45°	717.3	674.9	602.3	548.6	525.9
47.5°	676.7	629.6	558.0	499.5	479.8
50°	631.5	587.2	510.9	452.4	430.7
52.5°	591.0	542.0	466.6	405.3	386.4
55°	544.8	498.6	418.5	363.8	345.0
57.5°	503.3	453.4	372.3	320.5	304.4
60°	460.0	408.1	329.9	279.0	263.0
62.5°	416.6	364.8	286.5	239.4	222.4
65°	372.3	320.5	246.9	200.8	190.4
67.5°	328.0	275.2	203.6	168.7	157.4
70°	284.6	233.8	167.8	134.8	124.4
72.5°	241.3	191.3	132.9	107.4	104.6
75°	197.0	151.7	99.9	90.5	88.6
77.5°	156.5	115.0	78.2	72.6	70.7
80°	117.8	79.2	59.4	56.6	54.7
82.5°	81.1	49.0	42.4	39.6	39.6
85°	50.0	29.2	26.4	24.5	24.5
87.5°	22.6	12.3	12.3	11.3	10.4
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	20.64	22.19	21.00	22.51	22.82	18.01	19.57	18.38	19.88	20.19
	3H	22.42	23.81	22.79	24.14	24.50	19.12	20.52	19.50	20.85	21.21
	4H	23.08	24.39	23.47	24.74	25.11	19.52	20.83	19.92	21.18	21.55
	6H	23.56	24.77	23.97	25.14	25.53	19.84	21.05	20.25	21.41	21.81
	8H	23.71	24.86	24.13	25.25	25.65	19.95	21.10	20.37	21.49	21.89
	12H	23.81	24.92	24.24	25.30	25.73	20.02	21.13	20.45	21.51	21.94
4H	2H	20.90	22.21	21.30	22.56	22.94	18.72	20.04	19.12	20.38	20.76
	3H	22.86	23.95	23.27	24.35	24.75	20.00	21.09	20.41	21.49	21.89
	4H	23.63	24.61	24.06	25.03	25.47	20.48	21.46	20.91	21.88	22.32
	6H	24.23	25.08	24.68	25.52	25.98	20.90	21.75	21.35	22.20	22.66
	8H	24.42	25.22	24.88	25.66	26.13	21.04	21.84	21.51	22.29	22.75
	12H	24.57	25.28	25.05	25.76	26.23	21.15	21.87	21.64	22.35	22.82
8H	4H	23.69	24.49	24.15	24.93	25.40	20.80	21.60	21.26	22.05	22.51
	6H	24.35	25.01	24.84	25.50	25.98	21.31	21.98	21.81	22.47	22.94
	8H	24.58	25.17	25.09	25.68	26.17	21.52	22.11	22.03	22.62	23.11
	12H	24.78	25.31	25.29	25.80	26.36	21.69	22.21	22.20	22.71	23.27
12H	4H	23.68	24.39	24.16	24.87	25.34	20.84	21.56	21.33	22.04	22.51
	6H	24.33	24.93	24.85	25.44	25.93	21.38	21.97	21.89	22.48	22.97
	8H	24.61	25.13	25.11	25.62	26.19	21.63	22.16	22.14	22.65	23.21