

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: G3-1802-639-25

Luminaire Tested: S123RDRP-S775D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: G3-1802-639-25  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S775D835-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

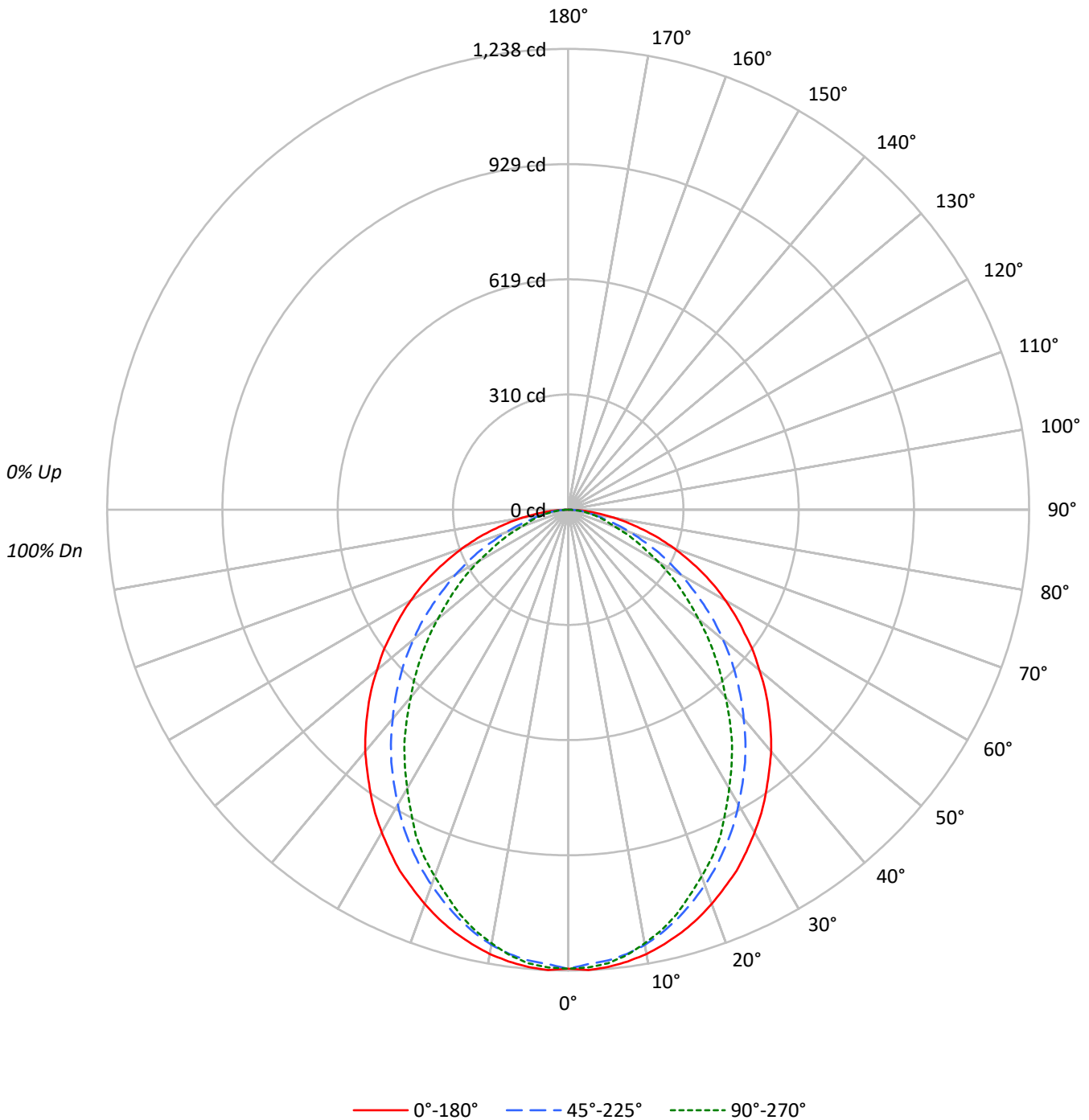
Lumens per Lamp: N/A  
Luminaire Lumens: 2785.6 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 3.92' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.4  
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	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°	13554	13554	13554
5°	13606	13418	13496
10°	13529	13250	13205
15°	13384	12940	12803
20°	13184	12552	12260
25°	12978	12117	11729
30°	12706	11615	10980
35°	12427	11112	10293
40°	12169	10519	9442
45°	11831	9934	8675
50°	11458	9269	7816
55°	11078	8510	7015
60°	10729	7695	6134
65°	10275	6815	5254
70°	9707	5721	4243
75°	8877	4502	3993
80°	7913	3988	3672
85°	6685	3532	3279

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11831 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.9	4.2
10°-20°	322.4	11.6
20°-30°	464.3	16.7
30°-40°	522.8	18.8
40°-50°	500.1	18.0
50°-60°	409.4	14.7
60°-70°	276.0	9.9
70°-80°	138.4	5.0
80°-90°	36.2	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°	902.6	32.4
0°-40°	1425.4	51.2
0°-60°	2334.9	83.8
0°-90°	2785.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2785.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1233	1233	1233	1233	1233	
5°	1233	1228	1216	1225	1223	117
15°	1176	1165	1137	1132	1125	331
25°	1070	1045	999	978	967	492
35°	926	890	828	785	767	580
45°	761	716	639	582	558	587
55°	578	529	444	386	366	518
65°	395	340	262	213	202	391
75°	209	161	106	96	94	223
85°	53	31	28	26	26	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1233	1233	1233	1233	1233
2.5°	1238	1234	1222	1233	1231
5°	1233	1228	1216	1225	1223
7.5°	1224	1219	1204	1210	1207
10°	1212	1205	1187	1188	1183
12.5°	1195	1187	1164	1163	1157
15°	1176	1165	1137	1132	1125
17.5°	1153	1141	1106	1096	1086
20°	1127	1111	1073	1060	1048
22.5°	1098	1079	1038	1021	1010
25°	1070	1045	999	978	967
27.5°	1036	1009	959	931	914
30°	1001	971	915	881	865
32.5°	966	931	871	833	816
35°	926	890	828	785	767
37.5°	886	847	782	734	712
40°	848	804	733	681	658
42.5°	805	761	687	629	609
45°	761	716	639	582	558
47.5°	718	668	592	530	509
50°	670	623	542	480	457
52.5°	627	575	495	430	410
55°	578	529	444	386	366
57.5°	534	481	395	340	323
60°	488	433	350	296	279
62.5°	442	387	304	254	236
65°	395	340	262	213	202
67.5°	348	292	216	179	167
70°	302	248	178	143	132
72.5°	256	203	141	114	111
75°	209	161	106	96	94
77.5°	166	122	83	77	75
80°	125	84	63	60	58
82.5°	86	52	45	42	42
85°	53	31	28	26	26
87.5°	24	13	13	12	11
90°	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	20.50	22.06	20.87	22.37	22.69	17.88	19.43	18.24	19.74	20.06
	3H	22.28	23.68	22.66	24.01	24.37	18.99	20.39	19.36	20.71	21.07
	4H	22.94	24.25	23.34	24.60	24.98	19.38	20.69	19.78	21.04	21.42
	6H	23.42	24.64	23.83	25.00	25.39	19.70	20.91	20.11	21.28	21.67
	8H	23.57	24.73	24.00	25.12	25.52	19.81	20.97	20.24	21.36	21.76
	12H	23.68	24.78	24.11	25.17	25.59	19.89	20.99	20.32	21.37	21.80
4H	2H	20.76	22.08	21.16	22.43	22.80	18.59	19.90	18.99	20.25	20.63
	3H	22.73	23.82	23.14	24.22	24.62	19.87	20.96	20.28	21.36	21.76
	4H	23.50	24.48	23.93	24.89	25.33	20.35	21.33	20.78	21.74	22.18
	6H	24.09	24.95	24.55	25.39	25.85	20.76	21.62	21.22	22.06	22.52
	8H	24.28	25.08	24.75	25.53	26.00	20.91	21.71	21.37	22.15	22.62
	12H	24.43	25.15	24.91	25.62	26.10	21.02	21.74	21.50	22.21	22.68
8H	4H	23.55	24.35	24.02	24.80	25.26	20.67	21.47	21.13	21.91	22.38
	6H	24.21	24.88	24.71	25.37	25.84	21.18	21.84	21.68	22.33	22.81
	8H	24.45	25.04	24.96	25.55	26.04	21.38	21.98	21.90	22.49	22.97
	12H	24.65	25.17	25.16	25.66	26.23	21.56	22.08	22.06	22.57	23.14
12H	4H	23.54	24.26	24.02	24.74	25.21	20.71	21.43	21.19	21.90	22.37
	6H	24.20	24.80	24.71	25.30	25.79	21.24	21.84	21.75	22.34	22.83
	8H	24.47	25.00	24.98	25.49	26.05	21.50	22.02	22.01	22.51	23.08