

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: P735881

Luminaire Tested: S122DRP-S675D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2024  
Report Number: P735881  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/24/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S675D835-X4F0-XX-UDD-W-W  
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

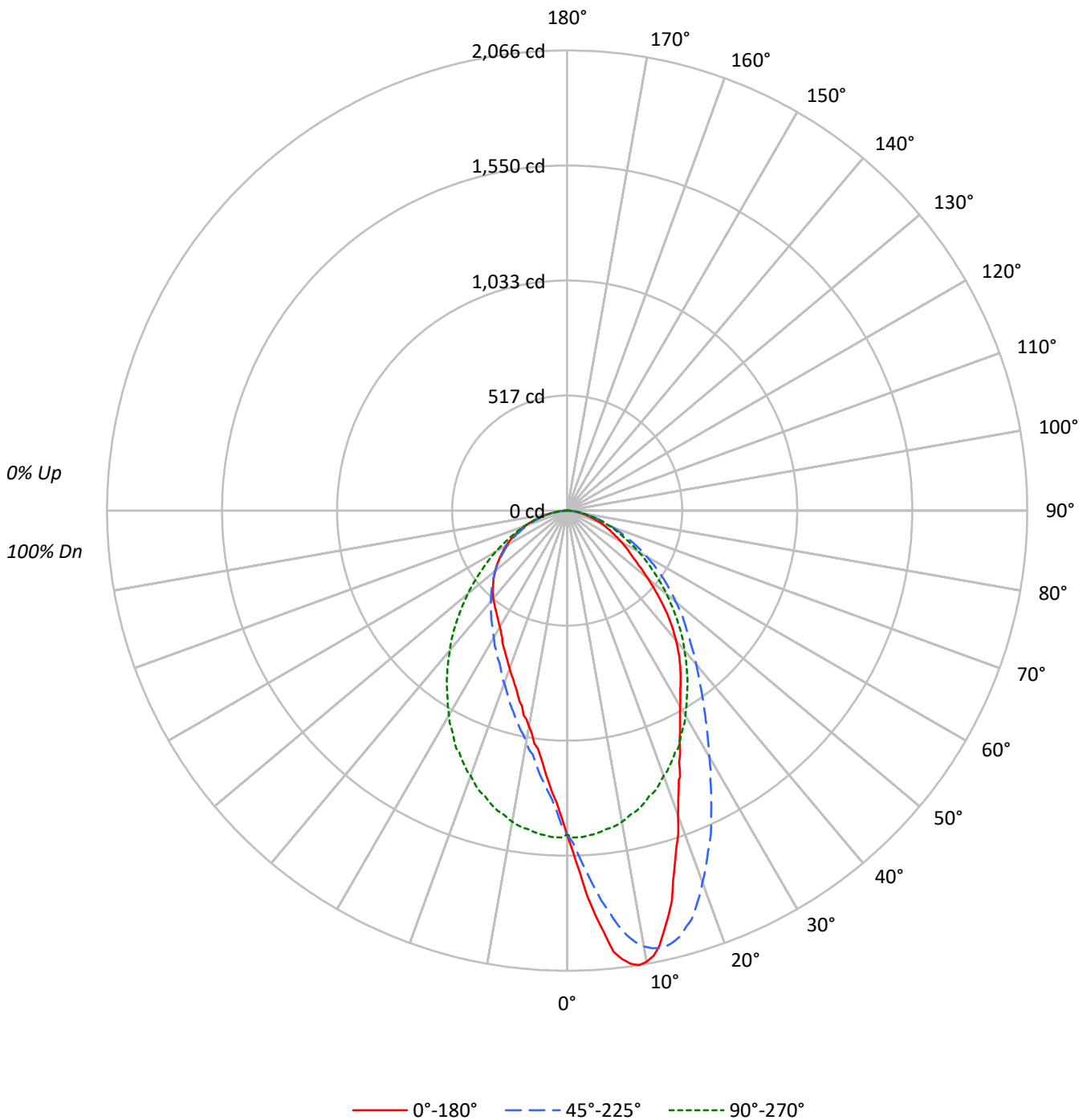
Lumens per Lamp: N/A  
Luminaire Lumens: 2960.4 lumens  
Efficiency: N/A  
Efficacy: 113.9 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 26  
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	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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58					56				
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51					49				
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46					44				
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41					39				
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37					35				
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					30				

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

	0°	45°	90°	135°	180°
0°	23492	23492	23492	23492	23492
5°	30810	28477	23614	19806	18898
10°	33724	32593	23264	17313	16133
15°	30338	33013	22633	15629	14308
20°	25034	30532	21770	14175	12972
25°	21396	27239	21004	13112	12025
30°	18923	23789	19800	12286	11261
35°	17503	21070	18567	11708	10939
40°	16018	19011	17283	11213	10876
45°	14111	17354	15984	10869	10732
50°	11881	16000	14644	10575	10600
55°	9993	14722	13230	10218	10415
60°	9009	13304	12013	9914	10204
65°	8176	11691	10697	9436	10010
70°	7364	10102	9630	8733	9489
75°	6425	8546	8235	7923	8671
80°	5393	6695	6695	6881	7252
85°	4076	4817	5002	5372	5187

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 25482 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.2	4.8
10°-20°	393.0	13.3
20°-30°	515.4	17.4
30°-40°	544.7	18.4
40°-50°	505.7	17.1
50°-60°	404.8	13.7
60°-70°	276.8	9.4
70°-80°	142.9	4.8
80°-90°	33.9	1.1
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°	1051.6	35.5
0°-40°	1596.3	53.9
0°-60°	2506.8	84.7
0°-90°	2960.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2960.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1455	1455	1455	1455	1455	
5°	1901	1757	1457	1222	1166	187
15°	1815	1975	1354	935	856	498
25°	1201	1529	1179	736	675	553
35°	888	1069	942	594	555	554
45°	618	760	700	476	470	475
55°	355	523	470	363	370	325
65°	214	306	280	247	262	212
75°	103	137	132	127	139	110
85°	22	26	27	29	28	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1455	1455	1455	1455	1455	1455	1455	1455	1455
1°	1535	1527	1492	1494	1468	1439	1412	1395	1381
2°	1625	1609	1554	1527	1468	1406	1350	1335	1316
3°	1734	1696	1620	1556	1466	1376	1299	1272	1269
4°	1822	1788	1687	1586	1461	1347	1260	1231	1217
5°	1901	1879	1757	1624	1457	1319	1222	1182	1166
6°	1992	1947	1813	1662	1450	1292	1188	1140	1118
7°	2029	2001	1876	1687	1441	1261	1145	1093	1077
8°	2055	2044	1926	1728	1437	1232	1107	1075	1056
9°	2066	2057	1962	1745	1430	1217	1088	1035	1014
10°	2057	2061	1988	1771	1419	1186	1056	1010	984
11°	2036	2046	2002	1801	1405	1161	1027	980	955
12°	1996	2018	2008	1822	1392	1139	1007	962	940
13°	1934	1983	2004	1831	1384	1114	982	930	902
14°	1878	1929	1993	1851	1370	1086	959	907	883
15°	1815	1874	1975	1857	1354	1063	935	878	856
16°	1727	1806	1942	1864	1335	1037	913	859	830
17°	1654	1739	1917	1868	1325	1017	894	830	811
18°	1587	1683	1872	1865	1309	994	866	809	791
19°	1534	1612	1827	1858	1287	972	845	794	773
20°	1457	1547	1777	1855	1267	952	825	773	755
21°	1393	1485	1731	1845	1253	933	810	753	737
22.5°	1309	1390	1654	1826	1222	901	777	734	712
23°	1299	1368	1634	1820	1213	894	766	723	705
24°	1236	1309	1587	1801	1190	872	748	710	689
25°	1201	1261	1529	1783	1179	852	736	693	675
26°	1152	1221	1477	1757	1155	834	717	678	661
27°	1116	1174	1423	1738	1127	815	702	663	642
28°	1081	1137	1371	1707	1107	794	691	650	630
29°	1045	1094	1329	1683	1088	776	674	633	614
30°	1015	1060	1276	1651	1062	755	659	621	604
32.5°	946	984	1168	1575	1000	713	623	588	578
35°	888	913	1069	1490	942	668	594	560	555
37.5°	827	851	979	1401	881	627	561	539	535
40°	760	792	902	1313	820	587	532	515	516
42.5°	693	730	827	1210	763	549	504	492	494
45°	618	665	760	1116	700	513	476	470	470
47.5°	540	600	702	1019	640	477	449	445	447
50°	473	527	637	925	583	444	421	420	422
52.5°	407	461	580	837	525	414	394	394	396
55°	355	397	523	745	470	379	363	366	370
57.5°	319	347	467	657	419	345	335	337	342
60°	279	301	412	576	372	312	307	311	316
62.5°	243	262	360	503	321	280	278	284	289
65°	214	227	306	429	280	248	247	256	262



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	184	194	259	359	239	216	216	226	231
70°	156	164	214	296	204	184	185	197	201
72.5°	127	134	174	238	165	154	157	167	171
75°	103	108	137	188	132	123	127	136	139
77.5°	79	83	101	138	101	96	100	108	108
80°	58	59	72	97	72	69	74	78	78
82.5°	38	40	47	62	48	47	49	52	52
85°	22	23	26	34	27	27	29	29	28
87.5°	9	10	11	13	12	13	13	11	12
90°	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	20.19	21.71	20.55	22.02	22.34	19.76	21.28	20.13	21.60	21.91
	3H	21.39	22.75	21.77	23.08	23.44	21.28	22.64	21.65	22.97	23.33
	4H	21.79	23.07	22.19	23.42	23.80	21.80	23.08	22.20	23.43	23.81
	6H	22.04	23.22	22.45	23.59	23.98	22.15	23.34	22.57	23.71	24.10
	8H	22.10	23.23	22.53	23.62	24.02	22.25	23.38	22.68	23.77	24.17
	12H	22.13	23.21	22.56	23.59	24.02	22.30	23.38	22.73	23.77	24.20
4H	2H	21.24	22.53	21.64	22.87	23.25	20.83	22.11	21.23	22.46	22.84
	3H	22.60	23.67	23.02	24.07	24.47	22.46	23.52	22.87	23.92	24.32
	4H	23.07	24.03	23.50	24.44	24.88	23.04	24.00	23.47	24.41	24.85
	6H	23.38	24.21	23.84	24.66	25.12	23.46	24.29	23.92	24.74	25.20
	8H	23.46	24.24	23.92	24.68	25.15	23.58	24.36	24.04	24.80	25.27
	12H	23.51	24.20	23.99	24.68	25.15	23.65	24.35	24.13	24.83	25.30
8H	4H	23.42	24.20	23.89	24.65	25.11	23.38	24.16	23.84	24.60	25.07
	6H	23.83	24.47	24.32	24.96	25.44	23.90	24.54	24.40	25.04	25.51
	8H	23.95	24.52	24.46	25.03	25.52	24.07	24.64	24.58	25.15	25.64
	12H	24.03	24.54	24.54	25.03	25.60	24.19	24.70	24.70	25.19	25.76
12H	4H	23.45	24.14	23.93	24.62	25.09	23.40	24.09	23.88	24.57	25.04
	6H	23.87	24.45	24.38	24.96	25.45	23.94	24.52	24.46	25.03	25.52
	8H	24.04	24.55	24.55	25.04	25.61	24.16	24.67	24.67	25.16	25.73