

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: G3-1802-639-10

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: G3-1802-639-10
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S675D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

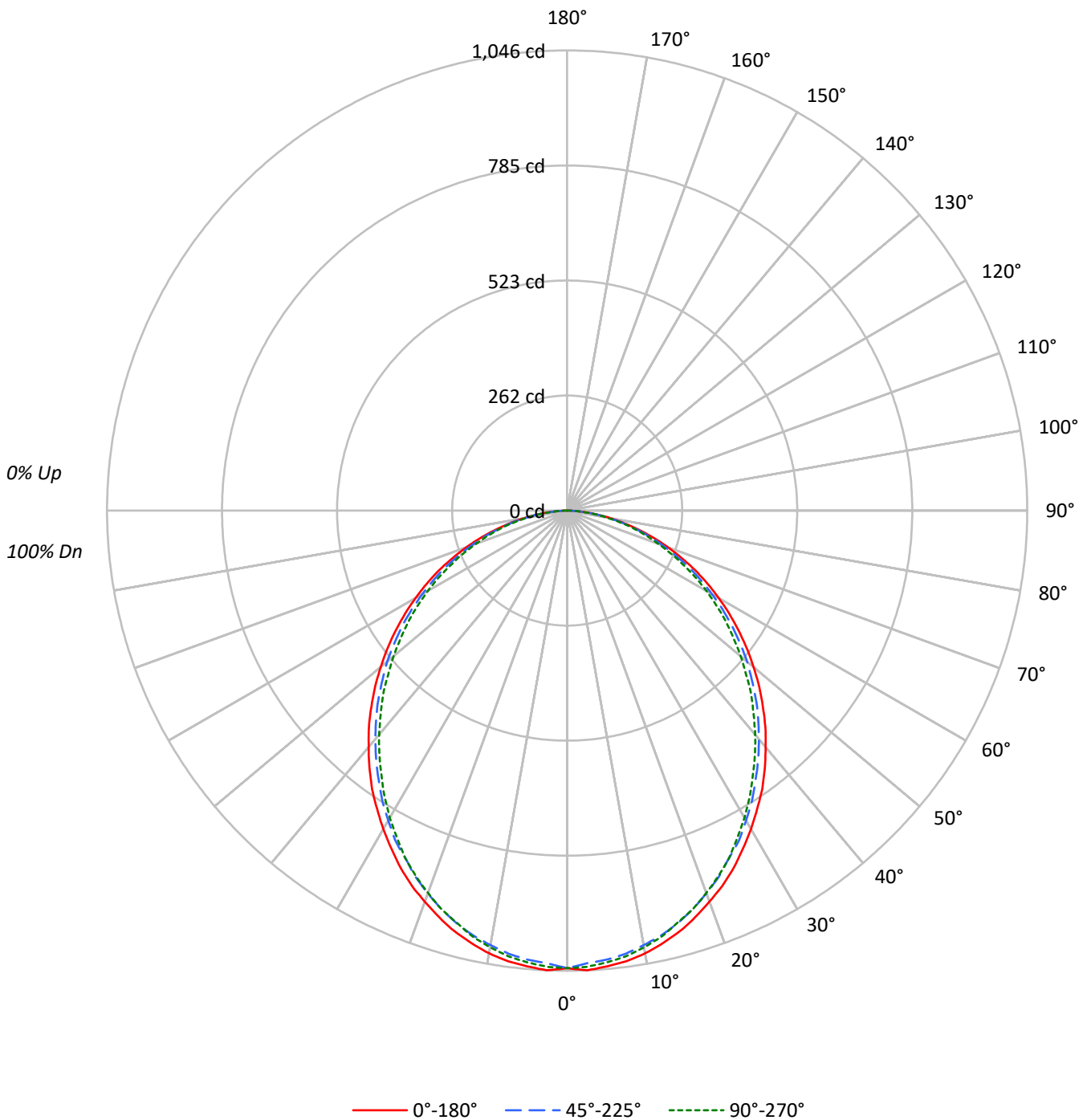
Lumens per Lamp: N/A
Luminaire Lumens: 2645.9 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.3
Input Voltage (V): 120
Input Current (A_{in}): 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	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19810	19810	19810
5°	19885	19598	19713
10°	19767	19400	19496
15°	19522	19148	19128
20°	19176	18770	18750
25°	18831	18306	18306
30°	18387	17881	17727
35°	17975	17370	17114
40°	17455	16858	16535
45°	16944	16351	15947
50°	16387	15824	15261
55°	15807	15210	14645
60°	15162	14476	13943
65°	14468	13747	13116
70°	13589	12865	12252
75°	12364	11849	11554
80°	10969	10640	10092
85°	8960	8523	7649

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16944 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	3.7
10°-20°	275.4	10.4
20°-30°	404.7	15.3
30°-40°	470.1	17.8
40°-50°	469.5	17.7
50°-60°	409.4	15.5
60°-70°	302.6	11.4
70°-80°	171.2	6.5
80°-90°	45.2	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°	778.0	29.4
0°-40°	1248.1	47.2
0°-60°	2126.9	80.4
0°-90°	2645.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2645.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1040	1040	1040	1040	1040	
5°	1040	1036	1025	1033	1031	99
15°	990	984	971	975	970	279
25°	896	888	871	873	871	412
35°	773	763	747	741	736	483
45°	629	622	607	596	592	485
55°	476	470	458	446	441	426
65°	321	315	305	296	291	317
75°	168	166	161	155	157	179
85°	41	40	39	36	35	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1040	1040	1040	1040	1040
2.5°	1046	1041	1030	1040	1038
5°	1040	1036	1025	1033	1031
7.5°	1033	1027	1016	1024	1022
10°	1022	1015	1003	1011	1008
12.5°	1007	1001	989	994	992
15°	990	984	971	975	970
17.5°	969	963	950	955	950
20°	946	940	926	929	925
22.5°	923	914	901	901	899
25°	896	888	871	873	871
27.5°	866	859	846	843	838
30°	836	828	813	810	806
32.5°	804	798	782	776	772
35°	773	763	747	741	736
37.5°	738	729	713	706	701
40°	702	694	678	669	665
42.5°	667	659	643	633	627
45°	629	622	607	596	592
47.5°	592	585	569	558	552
50°	553	548	534	520	515
52.5°	515	508	495	484	477
55°	476	470	458	446	441
57.5°	437	432	419	407	403
60°	398	394	380	369	366
62.5°	360	353	343	333	329
65°	321	315	305	296	291
67.5°	281	276	267	260	256
70°	244	240	231	224	220
72.5°	206	202	197	190	187
75°	168	166	161	155	157
77.5°	134	130	128	125	122
80°	100	99	97	94	92
82.5°	68	68	67	63	63
85°	41	40	39	36	35
87.5°	18	16	14	11	10
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	21.66	23.27	22.02	23.58	23.90	21.21	22.82	21.58	23.14	23.45
	3H	23.41	24.86	23.78	25.19	25.55	22.92	24.37	23.29	24.70	25.06
	4H	24.05	25.42	24.45	25.77	26.15	23.56	24.93	23.96	25.28	25.65
	6H	24.52	25.79	24.93	26.16	26.55	24.02	25.29	24.43	25.65	26.05
	8H	24.67	25.88	25.09	26.27	26.66	24.16	25.37	24.59	25.76	26.16
	12H	24.76	25.92	25.19	26.30	26.73	24.24	25.40	24.67	25.79	26.21
4H	2H	22.22	23.59	22.62	23.93	24.31	21.87	23.23	22.26	23.58	23.96
	3H	24.19	25.34	24.60	25.74	26.14	23.79	24.93	24.20	25.33	25.73
	4H	24.97	26.01	25.40	26.42	26.86	24.55	25.58	24.98	26.00	26.43
	6H	25.57	26.47	26.02	26.91	27.37	25.13	26.04	25.59	26.48	26.94
	8H	25.76	26.60	26.22	27.04	27.51	25.32	26.16	25.78	26.61	27.07
	12H	25.89	26.65	26.37	27.12	27.59	25.44	26.19	25.92	26.67	27.14
8H	4H	25.24	26.09	25.70	26.53	27.00	24.87	25.72	25.33	26.16	26.62
	6H	25.96	26.66	26.45	27.15	27.62	25.58	26.28	26.07	26.77	27.24
	8H	26.22	26.85	26.73	27.35	27.84	25.82	26.46	26.33	26.96	27.45
	12H	26.42	26.97	26.92	27.46	28.03	26.00	26.56	26.51	27.05	27.61
12H	4H	25.27	26.03	25.75	26.50	26.97	24.90	25.66	25.38	26.14	26.61
	6H	26.00	26.63	26.51	27.14	27.63	25.63	26.27	26.14	26.77	27.26
	8H	26.32	26.87	26.82	27.36	27.93	25.94	26.50	26.45	26.99	27.55