

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930940

Luminaire Tested: DFN2DS-SQ3F0-060DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930940
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-060DS830-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

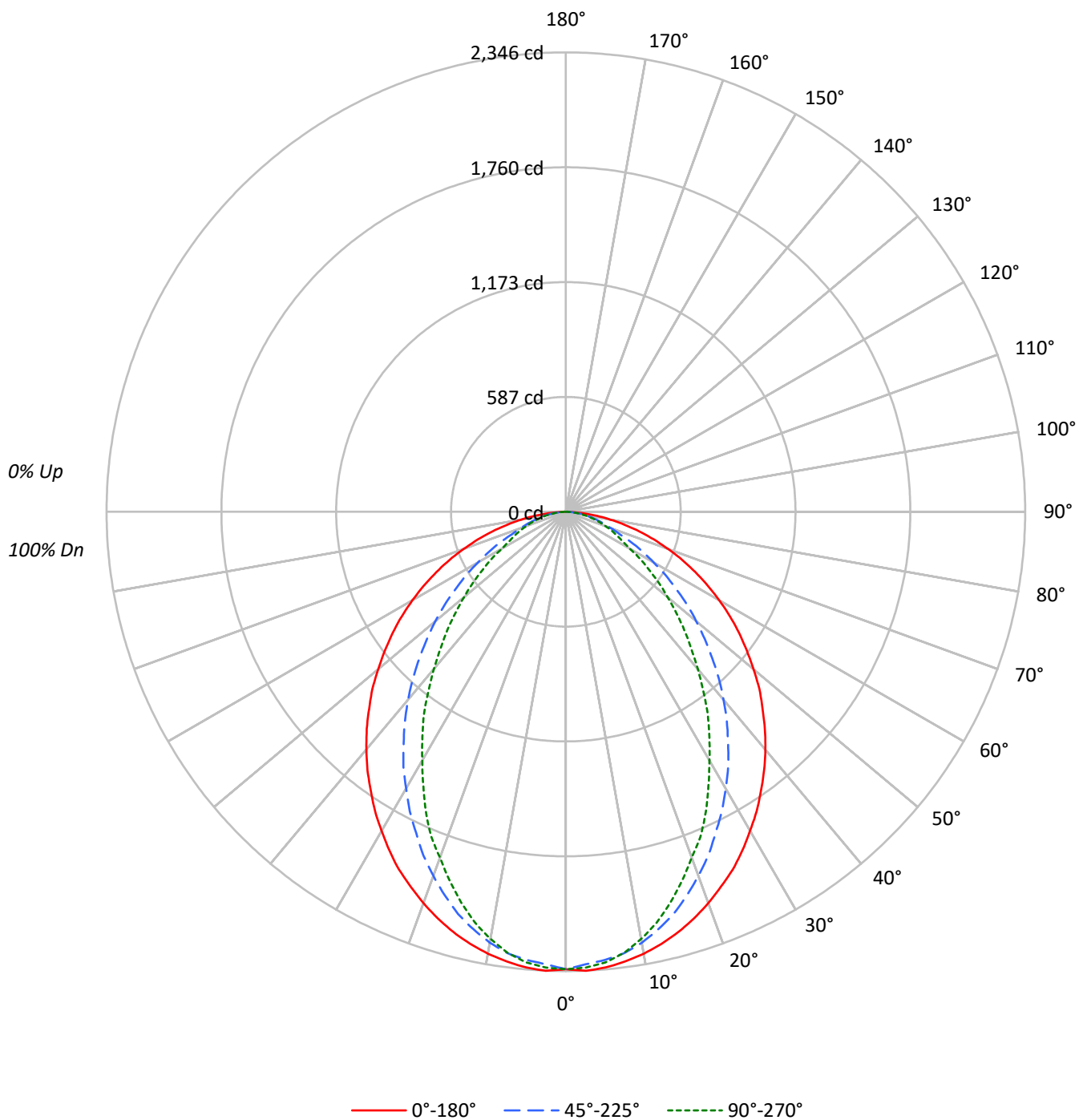
Lumens per Lamp: N/A
Luminaire Lumens: 4804.2 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 59.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2677	2677	2677
5°	2687	2643	2658
10°	2666	2600	2578
15°	2636	2523	2450
20°	2593	2413	2291
25°	2550	2288	2138
30°	2489	2159	1941
35°	2431	2020	1768
40°	2371	1875	1568
45°	2302	1713	1387
50°	2231	1549	1210
55°	2158	1372	1039
60°	2073	1187	862
65°	1978	997	785
70°	1863	821	722
75°	1722	749	674
80°	1520	669	614
85°	1194	527	527

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2302 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.9	4.6
10°-20°	601.0	12.5
20°-30°	843.8	17.6
30°-40°	919.8	19.1
40°-50°	845.4	17.6
50°-60°	663.9	13.8
60°-70°	432.2	9.0
70°-80°	222.5	4.6
80°-90°	56.8	1.2
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°	1663.7	34.6
0°-40°	2583.5	53.8
0°-60°	4092.8	85.2
0°-90°	4804.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4804.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2336	2336	2336	2336	2336	
5°	2336	2325	2298	2317	2311	221
15°	2222	2198	2127	2086	2065	626
25°	2017	1949	1810	1723	1691	928
35°	1738	1630	1444	1311	1264	1088
45°	1421	1279	1057	907	856	1097
55°	1080	915	687	560	520	965
65°	729	558	368	296	290	723
75°	389	241	169	154	152	411
85°	91	46	40	40	40	109
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2336.0	2336.0	2336.0	2336.0	2336.0
2.5°	2346.5	2336.0	2312.6	2333.9	2329.7
5°	2336.0	2325.4	2297.8	2316.9	2310.6
7.5°	2316.9	2304.3	2274.7	2283.0	2272.5
10°	2291.5	2276.7	2234.6	2228.1	2215.5
12.5°	2260.0	2240.8	2183.7	2171.1	2147.8
15°	2221.8	2198.4	2126.7	2086.5	2065.4
17.5°	2177.4	2143.5	2054.7	2008.2	1974.4
20°	2126.7	2084.3	1978.7	1925.9	1879.3
22.5°	2071.7	2023.0	1900.4	1828.6	1797.0
25°	2016.8	1949.1	1809.6	1723.0	1691.2
27.5°	1951.4	1879.3	1725.0	1625.6	1577.0
30°	1881.6	1801.0	1631.9	1524.3	1467.1
32.5°	1813.8	1716.5	1543.4	1416.4	1363.5
35°	1737.8	1629.9	1444.0	1310.7	1264.1
37.5°	1663.8	1547.3	1350.9	1204.9	1152.2
40°	1585.5	1458.8	1253.5	1103.5	1048.5
42.5°	1505.2	1370.0	1156.4	999.8	947.2
45°	1420.6	1278.9	1057.1	906.8	856.1
47.5°	1340.4	1190.3	962.0	811.7	765.3
50°	1251.5	1101.5	868.9	722.9	678.7
52.5°	1164.7	1006.2	780.1	640.6	600.4
55°	1080.2	915.3	687.0	560.3	520.1
57.5°	993.6	824.4	604.7	486.3	452.3
60°	904.8	735.7	517.9	410.2	376.3
62.5°	818.2	649.1	443.9	342.5	325.6
65°	729.4	558.0	367.9	296.1	289.6
67.5°	644.8	473.4	296.1	260.0	253.7
70°	556.0	391.1	245.1	224.1	215.5
72.5°	471.5	314.9	205.0	188.2	183.9
75°	389.0	240.9	169.1	154.3	152.3
77.5°	306.6	171.2	133.2	124.7	120.5
80°	230.3	122.6	101.4	93.1	93.1
82.5°	160.6	82.5	69.7	65.5	65.5
85°	90.8	46.4	40.1	40.1	40.1
87.5°	33.9	16.9	16.9	14.8	14.8
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	14.65	16.18	15.02	16.49	16.80	10.62	12.14	10.98	12.45	12.77
	3H	16.42	17.79	16.80	18.11	18.47	11.88	13.25	12.26	13.57	13.94
	4H	17.09	18.37	17.49	18.72	19.09	12.38	13.66	12.78	14.01	14.39
	6H	17.58	18.76	17.99	19.13	19.52	12.76	13.95	13.18	14.31	14.71
	8H	17.74	18.87	18.17	19.26	19.66	12.89	14.02	13.32	14.40	14.81
	12H	17.84	18.92	18.27	19.30	19.73	12.97	14.05	13.40	14.43	14.86
4H	2H	14.76	16.04	15.16	16.39	16.77	11.31	12.59	11.71	12.94	13.32
	3H	16.69	17.75	17.10	18.15	18.56	12.75	13.82	13.17	14.22	14.62
	4H	17.44	18.40	17.87	18.81	19.25	13.35	14.31	13.79	14.73	15.16
	6H	18.03	18.87	18.49	19.31	19.77	13.84	14.67	14.30	15.12	15.58
	8H	18.25	19.03	18.71	19.47	19.94	14.00	14.78	14.47	15.23	15.69
	12H	18.40	19.10	18.88	19.57	20.05	14.12	14.82	14.60	15.29	15.77
8H	4H	17.47	18.24	17.93	18.69	19.15	13.71	14.49	14.17	14.93	15.40
	6H	18.10	18.75	18.60	19.24	19.71	14.29	14.94	14.79	15.43	15.91
	8H	18.35	18.93	18.87	19.44	19.93	14.52	15.09	15.03	15.60	16.09
	12H	18.56	19.07	19.07	19.56	20.12	14.69	15.20	15.20	15.70	16.26
12H	4H	17.45	18.15	17.93	18.62	19.09	13.75	14.45	14.23	14.92	15.40
	6H	18.08	18.66	18.60	19.17	19.66	14.36	14.94	14.87	15.45	15.93
	8H	18.37	18.88	18.88	19.37	19.94	14.63	15.14	15.14	15.63	16.20