

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: P930220

Luminaire Tested: DFN2DS-HX3F0-080DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930220
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-HX3F0-080DS830-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

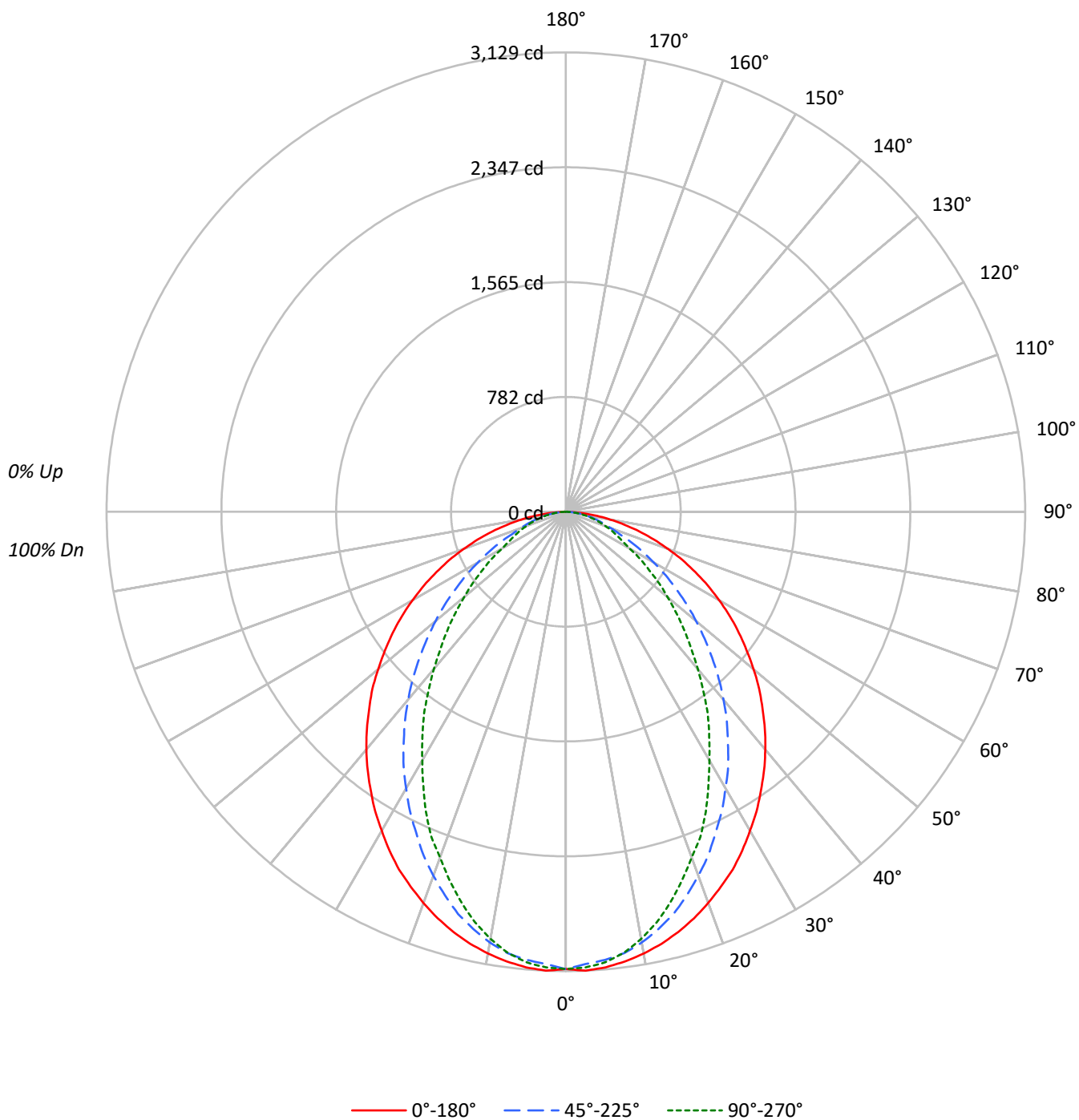
Lumens per Lamp: N/A
Luminaire Lumens: 6405.6 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 84.4
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

TEST NUMBER: P930220

CATALOG NUMBER: DFN2DS-HX3F0-080DS830-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930220

CATALOG NUMBER: DFN2DS-HX3F0-080DS830-RLL

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°	3608	3608	3608
5°	3622	3563	3582
10°	3594	3505	3475
15°	3553	3400	3303
20°	3495	3252	3089
25°	3437	3084	2882
30°	3356	2910	2616
35°	3276	2723	2383
40°	3197	2527	2114
45°	3103	2309	1870
50°	3007	2088	1631
55°	2909	1850	1401
60°	2795	1600	1163
65°	2666	1344	1058
70°	2511	1107	973
75°	2321	1009	909
80°	2049	902	828
85°	1609	711	711

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3103 cd/sqm

TEST NUMBER: P930220

CATALOG NUMBER: DFN2DS-HX3F0-080DS830-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.9	4.6
10°-20°	801.3	12.5
20°-30°	1125.1	17.6
30°-40°	1226.4	19.1
40°-50°	1127.2	17.6
50°-60°	885.2	13.8
60°-70°	576.2	9.0
70°-80°	296.6	4.6
80°-90°	75.7	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°	2218.3	34.6
0°-40°	3444.7	53.8
0°-60°	5457.1	85.2
0°-90°	6405.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6405.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3115	3115	3115	3115	3115	
5°	3115	3101	3064	3089	3081	295
15°	2962	2931	2836	2782	2754	835
25°	2689	2599	2413	2297	2255	1237
35°	2317	2173	1925	1748	1685	1450
45°	1894	1705	1409	1209	1142	1463
55°	1440	1220	916	747	694	1287
65°	972	744	490	395	386	964
75°	519	321	226	206	203	548
85°	121	62	54	54	54	145
90°	0	0	0	0	0	

TEST NUMBER: P930220

CATALOG NUMBER: DFN2DS-HX3F0-080DS830-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3114.6	3114.6	3114.6	3114.6	3114.6
2.5°	3128.7	3114.6	3083.5	3111.9	3106.2
5°	3114.6	3100.6	3063.8	3089.2	3080.8
7.5°	3089.2	3072.4	3033.0	3044.1	3029.9
10°	3055.4	3035.7	2979.5	2970.8	2954.0
12.5°	3013.3	2987.8	2911.5	2894.8	2863.7
15°	2962.4	2931.3	2835.6	2782.1	2753.9
17.5°	2903.1	2858.0	2739.6	2677.7	2632.5
20°	2835.6	2779.1	2638.3	2568.0	2505.7
22.5°	2762.3	2697.4	2533.9	2438.2	2396.0
25°	2689.0	2598.8	2412.7	2297.3	2254.9
27.5°	2601.7	2505.7	2300.0	2167.5	2102.6
30°	2508.7	2401.3	2175.9	2032.4	1956.1
32.5°	2418.4	2288.7	2057.8	1888.5	1818.0
35°	2317.0	2173.2	1925.3	1747.7	1685.4
37.5°	2218.3	2063.2	1801.2	1606.5	1536.2
40°	2114.0	1945.0	1671.4	1471.3	1398.0
42.5°	2006.9	1826.6	1541.9	1333.2	1262.8
45°	1894.2	1705.2	1409.4	1209.1	1141.5
47.5°	1787.2	1587.1	1282.6	1082.3	1020.4
50°	1668.7	1468.7	1158.6	963.9	904.9
52.5°	1553.0	1341.5	1040.1	854.1	800.6
55°	1440.2	1220.5	916.0	747.0	693.5
57.5°	1324.8	1099.3	806.3	648.4	603.2
60°	1206.3	980.9	690.5	546.9	501.8
62.5°	1090.9	865.4	591.9	456.7	434.3
65°	972.5	744.0	490.4	394.8	386.0
67.5°	859.8	631.3	394.8	346.6	338.3
70°	741.4	521.6	326.9	298.7	287.4
72.5°	628.6	419.8	273.4	250.9	245.2
75°	518.6	321.2	225.5	205.7	203.1
77.5°	408.8	228.2	177.7	166.3	160.6
80°	307.1	163.6	135.2	124.1	124.1
82.5°	214.1	110.0	93.0	87.3	87.3
85°	121.1	61.9	53.5	53.5	53.5
87.5°	45.1	22.4	22.4	19.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930220

CATALOG NUMBER: DFN2DS-HX3F0-080DS830-RLL

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	15.69	17.21	16.06	17.53	17.84	11.65	13.18	12.02	13.49	13.80
	3H	17.46	18.82	17.84	19.15	19.51	12.92	14.28	13.30	14.61	14.97
	4H	18.12	19.40	18.52	19.75	20.13	13.42	14.70	13.82	15.05	15.43
	6H	18.61	19.80	19.03	20.16	20.55	13.80	14.98	14.21	15.35	15.74
	8H	18.78	19.91	19.20	20.29	20.70	13.93	15.05	14.35	15.44	15.84
	12H	18.88	19.96	19.31	20.34	20.77	14.01	15.09	14.44	15.47	15.90
4H	2H	15.80	17.08	16.20	17.43	17.80	12.35	13.63	12.75	13.98	14.36
	3H	17.73	18.79	18.14	19.19	19.59	13.79	14.85	14.20	15.25	15.66
	4H	18.48	19.44	18.91	19.85	20.29	14.39	15.35	14.82	15.76	16.20
	6H	19.07	19.90	19.53	20.35	20.81	14.88	15.71	15.34	16.15	16.61
	8H	19.29	20.06	19.75	20.51	20.97	15.04	15.82	15.50	16.26	16.73
	12H	19.44	20.13	19.92	20.61	21.08	15.16	15.85	15.64	16.33	16.80
8H	4H	18.50	19.28	18.97	19.73	20.19	14.75	15.52	15.21	15.97	16.43
	6H	19.14	19.78	19.64	20.27	20.75	15.33	15.97	15.83	16.47	16.94
	8H	19.39	19.97	19.91	20.48	20.97	15.55	16.13	16.07	16.64	17.13
	12H	19.60	20.11	20.11	20.60	21.16	15.73	16.24	16.24	16.73	17.30
12H	4H	18.49	19.18	18.97	19.66	20.13	14.79	15.48	15.27	15.96	16.43
	6H	19.12	19.70	19.64	20.21	20.70	15.40	15.97	15.91	16.48	16.97
	8H	19.41	19.92	19.92	20.41	20.97	15.67	16.18	16.18	16.67	17.23