

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: P930133

Luminaire Tested: DFN2DS-HX3F0-030DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930133
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX3F0-030DS840-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

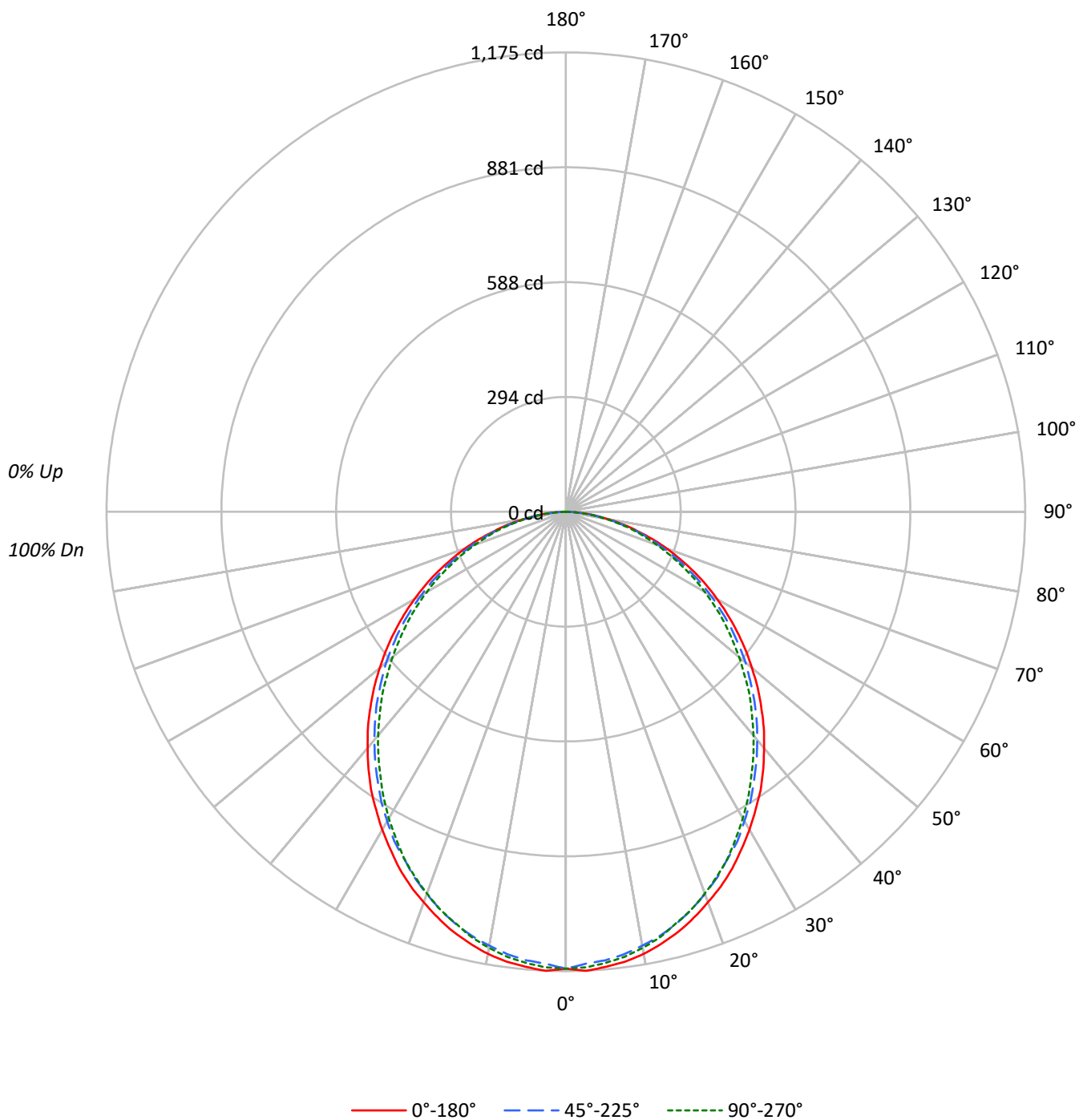
Lumens per Lamp: N/A
Luminaire Lumens: 2973.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 28.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930133

CATALOG NUMBER: DFN2DS-HX3F0-030DS840-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930133

CATALOG NUMBER: DFN2DS-HX3F0-030DS840-FLL

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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1354	1354	1354
5°	1359	1339	1347
10°	1351	1326	1332
15°	1334	1308	1307
20°	1310	1282	1281
25°	1287	1251	1251
30°	1256	1222	1211
35°	1228	1187	1169
40°	1193	1152	1130
45°	1158	1117	1090
50°	1120	1081	1043
55°	1080	1039	1001
60°	1036	989	953
65°	989	939	896
70°	929	879	837
75°	845	810	790
80°	750	726	690
85°	611	582	522

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1158 cd/sqm

TEST NUMBER: P930133

CATALOG NUMBER: DFN2DS-HX3F0-030DS840-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.7
10°-20°	309.4	10.4
20°-30°	454.7	15.3
30°-40°	528.2	17.8
40°-50°	527.5	17.7
50°-60°	460.0	15.5
60°-70°	340.0	11.4
70°-80°	192.4	6.5
80°-90°	50.8	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°	874.2	29.4
0°-40°	1402.3	47.2
0°-60°	2389.8	80.4
0°-90°	2973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1168	1164	1152	1161	1158	111
15°	1112	1106	1091	1096	1090	313
25°	1007	998	979	981	979	463
35°	869	857	839	832	827	542
45°	707	699	682	670	665	545
55°	535	528	515	501	496	478
65°	361	354	343	333	327	357
75°	189	187	181	174	176	201
85°	46	45	44	40	39	54
90°	0	0	0	0	0	

TEST NUMBER: P930133

CATALOG NUMBER: DFN2DS-HX3F0-030DS840-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.5	1168.5	1168.5	1168.5	1168.5
2.5°	1175.3	1169.7	1157.3	1168.5	1166.4
5°	1168.5	1164.1	1151.7	1160.7	1158.5
7.5°	1160.7	1154.0	1141.5	1150.6	1148.3
10°	1148.3	1140.4	1127.0	1135.9	1132.6
12.5°	1131.4	1124.7	1111.3	1116.8	1114.6
15°	1112.3	1105.7	1091.0	1095.5	1089.9
17.5°	1088.7	1082.1	1067.4	1073.0	1067.4
20°	1062.9	1056.2	1040.4	1043.7	1039.3
22.5°	1037.1	1027.0	1012.3	1012.3	1010.0
25°	1006.7	997.8	978.7	980.9	978.7
27.5°	973.0	965.1	950.5	947.2	941.6
30°	939.3	930.3	913.5	910.1	905.6
32.5°	903.4	896.7	878.7	871.9	867.4
35°	868.6	857.4	839.3	832.5	826.9
37.5°	829.2	819.1	801.1	793.2	787.6
40°	788.8	779.8	761.8	751.8	747.2
42.5°	749.4	740.4	722.5	711.2	704.5
45°	706.8	698.9	682.0	669.7	665.2
47.5°	665.2	657.4	639.3	626.9	620.2
50°	621.3	615.7	600.0	584.3	578.7
52.5°	578.7	570.8	556.3	543.8	535.9
55°	534.9	528.1	514.6	501.2	495.6
57.5°	491.0	485.4	470.8	457.3	452.8
60°	447.1	442.7	427.0	414.6	411.3
62.5°	404.5	396.6	385.4	374.2	369.7
65°	360.8	354.0	342.7	332.6	327.0
67.5°	315.8	310.1	300.0	292.2	287.7
70°	274.2	269.7	259.6	251.7	247.2
72.5°	231.5	226.9	221.3	213.5	210.2
75°	188.7	186.6	180.9	174.2	176.5
77.5°	150.6	146.0	143.7	140.4	137.1
80°	112.4	111.2	108.9	105.6	103.4
82.5°	76.4	76.4	75.4	70.8	70.8
85°	46.0	44.9	43.8	40.4	39.3
87.5°	20.2	18.0	15.7	12.4	11.2
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930133

CATALOG NUMBER: DFN2DS-HX3F0-030DS840-FLL

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	12.33	13.94	12.70	14.26	14.57	11.89	13.50	12.26	13.81	14.13
	3H	14.08	15.54	14.46	15.87	16.23	13.59	15.05	13.97	15.37	15.74
	4H	14.73	16.10	15.13	16.45	16.82	14.24	15.61	14.63	15.95	16.33
	6H	15.20	16.47	15.61	16.83	17.22	14.70	15.97	15.11	16.33	16.72
	8H	15.34	16.55	15.77	16.94	17.34	14.84	16.05	15.27	16.44	16.84
	12H	15.43	16.59	15.86	16.97	17.40	14.92	16.08	15.35	16.46	16.89
4H	2H	12.89	14.26	13.29	14.61	14.99	12.54	13.91	12.94	14.26	14.63
	3H	14.87	16.02	15.28	16.41	16.81	14.46	15.61	14.87	16.01	16.41
	4H	15.65	16.68	16.08	17.10	17.53	15.22	16.26	15.65	16.67	17.11
	6H	16.24	17.15	16.70	17.59	18.04	15.81	16.72	16.27	17.16	17.61
	8H	16.43	17.28	16.89	17.72	18.19	15.99	16.84	16.46	17.28	17.75
	12H	16.56	17.32	17.04	17.80	18.27	16.11	16.87	16.59	17.35	17.82
8H	4H	15.92	16.77	16.38	17.21	17.67	15.55	16.39	16.01	16.83	17.30
	6H	16.63	17.34	17.13	17.83	18.30	16.25	16.96	16.75	17.44	17.92
	8H	16.89	17.52	17.40	18.03	18.52	16.50	17.13	17.01	17.64	18.13
	12H	17.09	17.65	17.60	18.14	18.70	16.68	17.24	17.19	17.73	18.29
12H	4H	15.95	16.71	16.43	17.18	17.65	15.58	16.34	16.06	16.82	17.29
	6H	16.68	17.31	17.19	17.82	18.30	16.31	16.94	16.82	17.45	17.94
	8H	16.99	17.55	17.50	18.04	18.60	16.62	17.17	17.12	17.66	18.23